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Vol. VIII.] JANUARY, 1899. [No. 1.

LECTURE.

I. INTERESTING CASE OF CHOLECYSTITIS SIMULATING APPENDICITIS.

II. A RARE CASE OF PNEUMONIA WITH MENINGITIS.

III. AN UNUSUAL PERCENTAGE OF CASES OF MILK LEG FOLLOWING TYPHOID FEVER.[1]

BY J. M. DA COSTA, M.D.,
Professor of Theory and Practice of Medicine, Jefferson Medical College, Etc.

I.

A CASE demanding our attention is one which presented great diagnostic difficulty and during which at one time the patient was gravely ill but is better now. The man is 32 years old and was never ill before. He began feeling badly three weeks before coming to the hospital. He had headache, pain in back and legs, slight diarrhea, some fever and sweating. These symptoms were all aggravated the week preceding his admission. He had a rather high fever when admitted, his temperature being 103°. This continued, although very irregular in range, going down for a time and then shooting up, once or twice reaching the normal but remaining so only a short time. His tongue was coated, and tremulous, the pulse dicrotic, and the urine contained a trace of albumen. A natural supposition from the history of the case and the patient's age was that he was suffering from typhoid fever. This idea was soon set aside, however, because of the irregularity of the temperature. Confirming our view that this was not the disease was the fact that the Widal test was negative.

About this time there was a little pain over the left lung and a few râles were heard, there was also a slight pleurisy which soon passed away. Then there was a sharp pain felt over the region of the liver, with a slight

[1] Clinical lecture delivered at the Pennsylvania Hospital, Philadelphia.

discoloration of the conjunctiva. Bile was also found in the urine. The liver became enlarged and the abdomen was considerably swollen and tender. The recti muscles were also found to be rigid, this being most noticeable on the right side. At about the time these symptoms showed themselves, the temperature went up to 104°, and again was very irregular in its course. There were no malarial parasites found in the blood.

The things connected with this peculiar symptom of irregularity in temperature were tenderness, spontaneous pain in the right abdominal region, and the presence of bile in the urine.

Now the question naturally arose as to what was the matter with the man. With this array of symptoms we had a difficult and obscure case for diagnosis. Barring the lung trouble, which was never of much moment and which soon disappeared, and typhoid fever which was never seriously considered, what might we be dealing with? When symptoms such as these present themselves—tenderness in right iliac fossa, rigidity of the recti muscles, especially the right one, with a high fever, the most natural supposition would be that we were dealing with a case of appendicitis. Indeed, few patients are saved from the surgeon's knife under circumstances of this kind. And we seriously entertained the intention for a time of calling it "appendicitis." But we soon found that the symptoms were not settled in this place. The tenderness disappeared from below and became localized higher up. So we sought other possibilities. There were two conditions which might obtain and a discussion of these we think will be instructive, as the cases when they need to be differentiated are rather rare. The first condition was that of appendicitis of the upper part of the appendix. This condition may occur as well as of the lower part which gives tenderness, lower in the iliac fossa. There may be tenderness localized high up, with inflammation and suppuration of that part of the appendix. I once recognized this condition in a woman whom I was treating and recommended an operation. And I thought seriously of that conclusion here. But this theory would not account for the presence of bile in the urine. Neither would it account for the spontaneous pain. It must be remembered that there was not merely tenderness but that there was pain and *spontaneous* pain. So this view of the case was given up and I finally settled on what I am now certain is the correct diagnosis, namely, cholecystitis. We had here then an inflammation of the gall ducts and gall bladder, especially of the latter. The points in favor of this were first, the irregularity of the fever, second, the presence of bile in the urine, third, the site of tenderness and pain was favorable to this condition. Then also of considerable significance was the rigidity of the right rectus muscle which points to this condition. You may say that this was of no help in differentiating between cholecystitis and appendicitis because it is found in both affections. This is true, but, taken in connection with the other signs which point to the former trouble, it gives weight to the conclusion which I reach.

This condition sometimes follows exposure to cold; sometimes it is a result of typhoid fever and sometimes originates as diseases elsewhere—without any particularly noticeable cause. If this irregularity of temperature had gone on for some time or if the patient had had chills I should have had him operated upon. This would have indicated that the inflammation was purulent and under these circumstances the best chance would have been given him by operation.

As to treatment in this case, the man was purged by repeated small doses of calomel, and by the use of Rochelle salts. He was given in addition fifteen grains of the acetate of potassium and five grains of iodide of sodium three times a day. A blister was also applied over the region of the gall bladder.

The patient is now convalescent. I place no stress on the albumen in the urine. The kidney is still excreting a small amount of bile. But these will both pass away in a short time.

II.

This case is a very interesting one, although it has not much of a history. The man is an Italian, unconscious when admitted to the hospital, and the only thing we have succeeded in getting from him since is that he had been ill only three days before that time. All we can do is to give his condition when brought to the hospital. He was in a state of collapse; his feet and hands were cold, his face was flushed, his hands clinched, while the muscles of his back and limbs, and especially of the cervical region, were rigid; there was deviation of the eyes to the right, the pulse was rapid and thready, respiration shallow, and he was cyanotic. His temperature was 103°. This has since come down to normal. He had irregular circulation but the pulse never was high, ranging from 72 to 80. There was no cardiac murmur. A partial pneumonia of the right lung was made out.

Here then was a difficult diagnostic problem to solve. We thought of cerebro-spinal fever, of typhoid fever, of tubercular meningitis, and of pneumonia with meningitis. We made investigations for all these diseases.

1. *Tubercular Meningitis.* Adults may have this disease, but it is rarer than in children. But in either case it is insidious in its onset. Marked cerebral symptoms only come late. There are 10 or 12 days of headache and other symptoms before the cerebrum is notably affected. In this case there had been only 3 days, and there was unconsciousness and collapse. So that was not the disease here.

2. *Cerebro-Spinal Fever.* Here there was more difficulty in excluding this disease. The cerebral symptoms are rapid in onset in this disease. If there had been an epidemic of this fever in progress at this time we should have called this a case of this sort. But isolated cases are extremely rare. Neither was there any eruption on this man. I do not lay particular

stress on the eruption, however, for two reasons: First, it is not a necessary accompaniment of this fever, and second, it is especially apt to be absent in sporadic cases. Some doubt remained for a time as to whether this was the ailment here.

3. *Typhoid Fever.* You ask if typhoid ever occurs with as marked symptoms as these, and I answer yes, the typhoid bacillus may light up an inflammation in the meninges as it does in the intestines, but not ulceration. There is not the true typhoid delirium in such cases, but meningeal symptoms are manifested. In typhoid fever with meningitis there is high temperature with perhaps the same rise as in first week of the fever. But the temperature here soon began to decrease. This alone would have distinguished it from typhoid fever, and beside there was no eruption, diarrhea or other signs of typhoid fever.

4. *Pneumonia.* We think this was the true condition and that we have here a rare case of pneumonia with cerebral complications. There is an inflammation of the meninges in these cases but we are not sure of the pathological lesions. In some cases the same bacillus has been found in the meninges that is in the lungs. Meningitis comes on early in this complication. Here were the evident cerebral symptoms early in the attack with the physical signs of pneumonia in the lower part of the right lung. This then was the diagnosis, and the outcome has confirmed it.

Meningitis may mask several diseases and render diagnosis difficult. Meningitis in itself was not discussed as a probability in this case because there must be a cause for it. Generally it results from a blow or injury of some sort.

The treatment of this man has been continuous application of an ice-bag to his head in the way of local relief. Iodide of potassium was given in the amount of ten grains every four hours. Some four doses of digitalis were given as indications arose. Lastly we were forced by his weakness and collapse to give a moderate amount of whiskey. This was done very reluctantly but his condition absolutely called for it. On the whole this was not a bad treatment for pneumonia, but more attention was paid to the meningeal symptoms.

The man is convalescent now. There is no rigidity except a trace in the left arm, his heart is normal, and he has a bright look. We learn from this that such a complication though a grave one may end in recovery.

III.

Of the 135 soldiers who have been treated for typhoid fever in the Pennsylvania Hospital, 16 have suffered from milk leg. This is a percentage of nearly 12 per cent., while the general proportion is about 1 or 2 per cent. This greater tendency among the soldiers is due to some cause as yet unknown. If they had been subjected to long marches and thus on their feet often until more or less exhausted, it might be ascribed

to that. But many of them are from camps where no long marches have been made, some, however, being from Porto Rico. Of the 16 cases five were in the left leg and 11 in both legs.

As to the pathology of this condition it is the common belief that it is due to phlebitis. This was my own belief until a study of cases convinced me that this was not necessarily the cause. The real reason is thrombosis of a vein. There may or may not be inflammation present. This explains why there is sometimes marked tenderness while in other cases there is no tenderness at all. In all cases there is clotting, disturbance of circulation, and swelling. This pressure of the clot may cause secondary affection of the accompanying artery which results in arterial thrombosis and perhaps gangrene of the foot. This is rare, however. The morbid condition of the vein may lead to fatal results, but this is also rare.

In the one case we show, the attack occurred the fiftieth day of the disease, in the internal saphenous vein of both legs. There was no rise of temperature and but little swelling. The veins still have a cordy feeling to the touch. The second case was seized on the fifty-ninth day of the fever, only in the calves of both legs.

The treatment should be elevation of the leg. The pain may be relieved by applying hot lead-water and laudanum or hot witch-hazel. The former in our experience seems to afford the most relief; a light laxative is given unless diarrhea of the fever persists. Subsequently if there is much pain, belladonna plaster in narrow strips is applied or belladonna ointment instead. Absolute rest is essential. The secret of success is principally in not allowing the patient to get out of bed too soon; when he does get up mechanical support should be given by bandages or elastic stocking. I have known cases where the patient could not walk without pain and swelling eighteen months after the attack. Milk leg, while painful and tedious, is not to be considered a grave complication of typhoid fever.

Professor Tyson on the General Practitioner. In the course of an address delivered at the Eighteenth Anniversary of the Founding of the Gloucester County Medical Society, Professor Tyson said: "To sum up, then, the general practitioner of the present day is, in point of fact, a man who practices all the departments of medicine as distinguished from surgery; who practices midwifery, surgery and gynecology, except the major operations demanded by it and by surgery, and who treats also the minor affections of the eye and ear. While this is practically true of the general practitioner of the city, the field must be extended in the country to include all operations, delay in which is dangerous to life. And it is the general practitioner in the country, I take it, you have in mind when you ask me to treat the subject. It is in the country only, in fact, that the general practitioner in the truest sense can be met, so that in a word the general practitioner is the country practitioner."

ORIGINAL PAPER.

CHRONIC PLUMBISM FROM DRINKING-WATER.[1]

BY L. SMIRNOW, M.D.,
New Britain, Conn.

INTRODUCTION.

THE subject of chronic plumbism from drinking-water, although of long standing, is one which has never received sufficient attention from the general medical practitioner. Numerous attempts have been made, in this country as well as in Europe, to convince the physician of the dangers arising from the use of lead pipes as conduits for drinking-water, and to inform the public that they are constantly exposed to a deadly poison, the effects of which, when accumulated in sufficient quantity, are in many cases too horrible to witness. Notwithstanding these plausible efforts, the public has remained blind to this source of danger and the physician unconscious of the true cause of the disease in many obscure cases. The greater part of literature rests in silence, and the efforts of the authors have remained null. Little or no action has been taken by any legislative administration, in any part of the world, to substitute lead pipes by conduits of a safer kind, and thereby insure the health of the public, and little or no precaution has been taken by the public itself against this danger. As a consequence of this, numerous obscure cases of plumbism walk the streets of the many cities; the cause of their malady being undetected, they are given up as "hysterical," etc.; the disease thus allowed to take its course has but one goal to reach, *i. e.*, death.

It has been stated by those who favor the use of lead pipes (1) that the cheapness of the metal and the ease with which it undergoes moulding into any shape desirable, and (2) the rarity of cases of chronic plumbism from this source renders it a safe and convenient metal for the purpose. The former argument can readily be disposed of by stating the fact that safer conduits can be made at an equal price or a trifle higher, and also modern improvements in the arts equally extend to the construction and fitting of service pipes. It is the second statement that requires our attention, since it deals with the public health, and its truth or falsehood is to be determined. It is just this serious mistake that has allowed a great multitude of people to endure endless suffering, and many others to reach their graves prematurely. And although my main object is to point out the quantity of lead in drinking-water that may prove injurious, I will endeavor to

[1] A portion of a thesis entitled: "The Quantity of Lead in Drinking Water that may Prove Injurious to Man, and Improvements on the Separation of Lead from Urine by Electrolysis."

show the many obscure cases that have been treated for jaundice, dyspepsia, etc., without effect, until finally the true cause of the disorder has been accidentally discovered and a cure effected by removing the same. It will be seen, therefore, that the statement of the rarity of such cases is a proof of ignorance of the facts, and a lack of comprehension in regard to possibilities on the part of those making such statements. From the testimonies of good authorities, as will be seen in the following pages, it appears certain that a great number of cases of chronic lead poisoning went to the termination without ever having been detected, and many hundreds, many thousands, are still suffering in the form of dyspepsia, constipation, "biliousness," etc., as effects of poisoning by lead from drinking-water, the cause not being known.

J. B. Harrison,[1] of London, whose experience with cases of plumbism can hardly be equalled, in regard to lead poisoning from drinking-water, says: "I am almost afraid of enumerating the cases which have fallen under my observation, lest, in relation of the truth, I lay myself open to the appearance of exaggeration." The cases he published are very numerous, some of which will be included in this collection.

Speaking of lead pipes, Dr. H. Osborn[2] says: "There is but little chance of improving our sanitary conditions in England if a wholesale system of poisoning be allowed to exist."

Such, then, are the opinions that echo in the annals of medical literature, and that have always found ample expression at the hands of many individuals.

Historical.

Lead pipes may be seen at this day among the ruins of the Coliseum and leading to the baths and fountains of Pompeii and Herculaneum.[3] Aretæus, Ætius and Palladius have described lead colic and paralysis from lead with more or less minuteness, as arising from various sources.[4] Palus Agineta was one of the first to distinctly describe lead colic, without, however, being aware of its true cause.[5] The Roman architect, Vitruvius, who flourished in the time of Cæsar and Augustus, forbids the use of lead as conduits for water, because cerruse, he says, is formed on it, which is hurtful to the human body.[6] Galen also condemns the use of lead pipes, because he was aware that water transmitted through them contracted a muddiness from the lead, and those who drank such water were

[1] On contamination of water by lead.

[2] *Medical Times*, Lond., Vol. XIX., p. 424.

[3] Dr. Horsford, Boston Documents, No. 24, 1849.

[4] Stille's Therapeutics and Materia Medica, 1868, Vol. I., p. 184.

[5] Dr. G. Gregory, Theory and Practice of Physics, 1830.

[6] De Architectura, Lib. VIII., C. VII. "Multo salubrior ex tubulis aqua, quam per fistulas: quod per plumbum videtur esse ideo vitiosa, quod ex eo cerrusa nascitur: hæc autem dicitur esse nocense corporibus humanis. Ita si quod ex eo procreatur id est vitiosum non est dubium quin ipsum quoque non sit salubre."

subject to dysentery.[1] The first author who drew the attention of the profession to the subject in England was Sir George Baker in 1767.[2] Early in this century Tanquer el des Planches had studied lead diseases most exhaustively, and to him is due the credit of defining precisely the nature of these diseases and their relation to one another. In 1834 Dr. Burton discovered the blue line on the gums of patients suffering from chronic lead poisoning and in 1840 announced it in a paper before the Medical and Chirurgical Society of London.[3]

The Action of Water on Lead.

It has been maintained by Drs. Christison, Thompson, Horsford and others, that water acts on lead pipes only for the first few months after it is brought in contact with them, its further action being arrested by the formation of an impenetrable coating of lead carbonate and lead sulphate, whereby the danger is averted. This, however, has been disproved, as will be seen, by many cases of lead poisoning occurring from the use of water drawn through lead pipes that had been as many as twenty years in use, in consequence of the fact, no doubt that any excess of CO_2 in the water will dissolve this "protecting" coat, by which a more disastrous effect is produced. It is for the above-mentioned pecularities that the question of the action of water on lead becomes of importance in these pages.

Dr. Lambe, of England, and later, Guyton-Morveau, of France, devoted their attention for a time to experimenting upon the action of water on lead. Their opinions illustrate the uncertainty which attended the earlier labors in the field of investigation. While the former believed that rain or snow water (particularly pure) does not corrode lead, the latter believed that distilled water, the purest of all waters, acts rapidly on it.[4] That distilled water acts on lead in the presence of air, as was thus pointed out by Guyton-Morveau, is no longer a matter of doubt. This is well illustrated by the following experiment of Mr. Taylor:[5] A piece of lead was placed in a vessel of recently distilled water, which had been boiled to expel the air, and the vessel kept *in vacuo* for a period of three days. At the end of this time the lead had undergone no change; the water was perfectly clear and free from any precipitate; while in another vessel similarly prepared, but which remained exposed to the air, the lead, especially at its upper part and edges, had acquired a crystalline incrustation of carbonate; and loose portions of that salt were floating in the water so as to render it turbid on agitation.

"Such is the action of distilled water on lead, in presence of air," says

[1] R. Christison, On Poisons, 1845; Dr. Horsford, Boston Documents; J. B. Harrison, Lond., 1852, etc.

[2] Dr. G. Gregory, Theory and Practice of Physics, 1830.

[3] *Trans. Medico-Chirurgical Society*, Lond., Vol. III., 1840.

[4] *Proceedings Amer. Acad. of Arts and Sciences*, 1848, p. 63.

[5] Guy's Hospital Reports, 1838, p. 64.

Guyton-Morveau,[1] "that it can be made a test for the purity of the water, provided no acids be present in it." Captain Philip Yorke,[2] however, states that if a piece of lead be left in a tightly stoppered bottle filled with distilled water, after some time there will be found a slight amount of lead in solution, although the air had no access to the water.

The cause of the action of distilled water on lead, according to Professor B. Silliman, Jr.,[3] of Yale College, is due to the presence of salts of nitrous acids. These salts are always present in ordinary distilled water, and their action gives rise to the common assertion that pure water dissolves lead very rapidly. This, he says, is not true, pure water does not act on lead at all: a statement which is corroborated by similar observations of Dr. Medlock.[4]

The part played by free O and CO_2 in the process of lead corrosion by water can be concisely and properly stated as follows: If distilled or any other pure water, such as rain or snow water, or the water of some rivers or springs, be brought in contact with lead in the presence of air, the water will be found to act upon the lead quite energetically, and it will more or less dissolve it. The chemical process involved being of considerable interest: an oxide of lead is first formed, which is slightly soluble in water. The solution then absorbs CO_2 from the air, the CO_2 precipitating the lead in great part from the water as a hydrated-oxy-carbonate, $PbCO_3$; ($PbHO_2$).

Of late years a theory has arisen concerning the protective properties of hard waters, due to the presence of neutral salts. Such are believed to be the effects of these salts that they would entirely prevent the corrosion of lead by the water, so as to render said water, being transmitted through lead pipes, absolutely safe for use. That this theory is not supported by actual facts, and does not bear the test of time, will be seen in Section IV. It is of considerable interest, however, to consider the observations and experiments which led to this theory, and, indeed, so far as the experiments are concerned, the effects of these salts cannot be said to be any different. It is the conclusion that is erroneous. For, whereas the experiment is made with a tumblerful of water and a stick of lead, weighing but a few grains, under a normal and constant pressure and temperature, and, perhaps, quietly put away in some dark corner, the comparison is made to similar things, but altogether in different proportions and under different and varying conditions. Thus, in actual practice, many feet of lead pipes and a vast quantity of water are involved, the pressure and temperature varying so frequently and so greatly, the amount of air, O and CO_2 in the water, being dependent upon so many conditions, obviously varies extremely; the extent of decomposition of animal and vegetable matter, which has a very impor-

[1] *Annales des Chimie*, Vol. 71 (1809), p. 198.
[2] *The London and Edinburgh Philosophical Magazine.*
[3] Report on Mystic Pond, 1862.
[4] Records of Pharmacy and Therapeutics, London, 1857, p. 34.

tant relation to the subject in question, also varying at times, it is evidently plain that this condition cannot, for a single moment, be likened to the experiments above referred to, and that conclusions drawn from such experiments are liable to ultimately prove detrimental. And, as will be seen, such conclusions have proven harmful.

It is often asserted, in treatises on the subject, that sulphates, phosphates and carbonates decrease the action of water on lead; that one part of sulphates in 5,000 parts of water interferes with, if not entirely prevents, said action; and that water, such as is supplied to the city of London, of twelve or thirteen degrees of hardness before, and three degrees after boiling, is absolutely without solutive power on lead. It is further maintained that in nearly all town waters the amount of carbonate of lime present is sufficient to prevent injurious action. Taylor states that if a water has as little saline matter as the 15000th part of the weight of the water, it is liable to become impregnated with lead. The Thames water, he says, contains about the 7000th part of its weight of saline matter, and he has kept in it, for nine years, a mass of lead exposing fifty-eight square inches of surface, without any carbonate being produced. Distilled water treated in like manner, during the same period, produced a very considerable quantity of hydrated oxide and carbonate of lead. A mixture of equal parts of distilled and river waters, says Mr. Taylor, had no action on lead; consequently a preservative effect existed where the proportion of saline matter could not have been greater than the 14000th part. The Edinburgh water, according to R. Christison, contains about the 12000th part of its weight of saline matter; "and it has but a feeble action on lead." That used at Tunbridge some years since, contained only the 38000th part of saline matter. A quantity so small, that with the knowledge of these facts, it is not surprising that the water should have become contaminated with lead, and have given rise to lead colic among the inhabitants.

Guyton-Morveau was one of the first experimentalists on this subject. Having found that distilled water corroded lead he proceeded to inquire why no change of this kind takes place in some natural waters, and being aware that most spring and river waters differ from that which has been distilled chiefly in containing sulphate of lime and muriate of soda, he tried a solution of each of these salts, and discovered that the addition of a certain quantity of either to distilled water takes away from it the power of attacking lead. Professor Christison [1] has extended these researches and found that carbonates, hydriodates, phosphates, nitrates, acetates, tartrates and arseniates also possess the power of preventing the corrosion of lead by water. The degree of this preservative property differs much with different salts. The acetate of soda, he says, is but an imperfect preventive when dissolved in the proportion of a hundredth part of the water; white crystals are formed, and the lead loses about a fourth of what is lost in distilled water during the same time. Arseniate of soda is, on the con-

[1] On Poisons, 1845, p. 403.

trary, a complete preservative when dissolved in the proportion of a 12000th. Phosphate of soda and hydriodate of potash, he claims, are almost effectual preservatives in the proportion of a 30000th part. Nitrate of potash in the proportion of $\frac{1}{1000}$ prevents the action of the water almost entirely, but if the proportion be diminished to $\frac{1}{1600}$ the loss sustained by the lead is fully a third of the loss in distilled water. Muriate of soda is a preventive when it is $\frac{1}{2000}$ in solution, and sulphate of lime when $\frac{1}{4000}$ in solution. When it is attempted to ascertain, he adds, the relative preserving power of the neutral salts, it will appear that those whose acid forms a soluble salt with the lead are the least energetic. Thus the protecting powers of acetate of soda, nitrate of potash, muriate of soda, sulphate of lime, arseniate of soda, and phosphate of soda, are inversely as the solubility of the acetate, nitrate, muriate, sulphate, arseniate and phosphate of lead.

As a result of a number of experiments Dr. T. Grace Galvert[1] states that after leaving the city water of Manchester (Eng.) in the pipes for six weeks, its corrosive action on the lead apparently ceases, but if the water again be left in the pipes for twelve hours it will be found to contain $\frac{2}{10}$ of a grain of lead per gallon.

The influence of pressure and temperature on the action of water on lead was investigated by Dr. Sinclair White,[2] and he found that the greater the pressure the greater amount of lead is taken up, and the greater the temperature the greater the solvency. Dr. Hayes[3] also observed that elevation of temperature increases the quantity of lead dissolved in a given time. From this it may be inferred that any condition increasing the temperature of the water, as in well-heated rooms, laundries, shops, etc., also increases the danger of lead poisoning.

The Unsafety of Lead Pipes, Opinions of Chemists and Physicians, Plumbism Simulating Other Diseases.

To determine to what extent the "insoluble" coats of lead carbonate and lead sulphate are protective, we need but look at the results obtained with hard water and lead pipes that were several years in use, and in all cases it will be found that the facts of to-day are in opposition to the prophecy of twenty, or more, years ago. Thus the Croton water, of New York, has been thought to be a safe water on account of its hardness, but now I can point to some cases of lead poisoning having occurred from the use of that water (vide Cases 58–62). These are very few, due to the fact that the physicians of that city have never thought of the possibility of lead poisoning from Croton water, and have therefore left many cases go undiagnosed. Analysis of Croton water by Dr. Dana, in 1846, drawn

[1] *Dingler's Polytechnisches Journal*, Vol. 162, p. 220.

[2] *N. Y. Medical Journal*, September 21, 1889; *Medical News*, Philadelphia, April 2, 1892.

[3] Report of the Consulting Physicians, Boston, 1848, p. 24.

from a lead service-pipe which had been in use from the date of introduction of that water, revealed lead in solution. Dr. James R. Chilton, of New York, has repeatedly found lead in Croton water drawn through lead pipes.[1]

But a few years ago the Cochituate water has been pronounced a safe water to be drawn through lead pipes, to-day all evidence points against it. When the introduction of Cochituate water into Boston was under discussion, Professor Horsford, of Cambridge, made a series of experiments with regard to the action of this, as well as of other waters, upon lead.[2] He concluded that this water may be safely transmitted through lead pipes, and may be used for drinking and culinary purposes with impunity, for the following reasons:

"In experiments with Croton, Fairmount, Jamaica, and Cochituate waters made with lead, the latter was found to act as favorably as the other waters." Also that "a coat forms upon lead in Cochituate, as in the other waters, above mentioned, which for all practical purposes becomes, in process of time, impermeable to and insoluble in the water in which it occurs." The water being thus favored, was introduced into Boston, lead pipes being used to convey it.

Cases of lead poisoning through the Cochituate water are now known, however, to be numerous (vide Cases 63–69), and, undoubtedly, will soon be more easily recognized, and therefore the number so poisoned will increase.

It can now be demonstrated that waters, which in the laboratory seemed to corrode lead but slightly, really act very violently on the pipes through which they are conveyed. Mr. Wm. R. Nichols, of the Massachusetts Institute of Technology, states that he has examined many samples of Cochituate water drawn from pipes, and has never failed to find indications of lead. The following quantitative determinations were made by him:[3]

No. 1. Water dipped from the upper part of the Cochituate Lake in a glass jar, August 31, 1870, 1,000 c. c., failed to give indications of lead.

No. 2. Water from one of the drinking-fountains on the Boston common, July 20th; 100,000 parts of this water contained 0.0415 parts of metallic lead, equivalent to 0.0242 grains to the U. S. gallon of 231 cubic inches.

No. 3. Water from private residence, No. 137 Walnut Ave., July 19th. The water is delivered through one hundred feet or more of tin-lined pipe, and then through ten or twelve feet of lead pipe. The pipes have been in use six months, 100,000 parts of the water contained 0.0342 parts of metallic lead, equivalent to 0.029 grains to the gallon.

No. 4. Water from hot water pipes from same dwelling house as No. 3, July 21. This water passed through forty additional feet of lead pipe, through a lead-lined tank, and through an ordinary copper boiler; 100,000

[1] *N. Y. Journal of Medicine*, Vol. VI., 1851.

[2] Boston Documents, 1848, Nos. 18 and 23; *Proceedings American Academy of Arts and Sciences*, Vol. II., p. 99.

[3] Report of State Board of Health of Mass., 1871.

parts of the water gave 0.191 parts of metallic lead, equivalent to 0.112 grains to the gallon.

No. 5. Water from the Chemical Laboratory of the Massachusetts Institute of Technology, drawn June 25th, early in the morning, the water standing some fourteen hours in the lead pipe, which is about 150 feet long, and has been in use several years; 100,000 parts contained 0.098 parts of metallic lead, equivalent to 0.057 grains to the gallon.

No. 6. Water from the same pipe as No. 5, after running out enough to clear the pipe; 100,000 parts of it gave 0.0307 parts of metallic lead, equivalent to 0.0179 grains to the gallon.

No. 7. Water from private residence No. 8 Sawyer Street, September 20th. The water had been let into the pipes only four days previously, and, at the time the sample was taken, had remained in the pipes three or four hours. The pipe is of lead and is fifty feet in length; 100,000 parts gave 0.073 parts of metallic lead, equivalent to 0.0427 grains to the gallon.

No. 8. Water from private residence, Kendal Street, September 26. This water was let into the pipes some four months since, and none had ever been drawn previous to this time, 100,000 parts of it gave 0.0937 parts of metallic lead, equivalent to 0.0547 grains to the gallon.

In view of the foregoing quantitative determinations, and many observations on various samples of lead pipes which have been in actual service, Mr. Nichols concludes that Cochituate water, which has passed through lead pipes, is never absolutely free from lead. Dr. Hayes, in his report to the Board of Consulting Physicians of Boston, on the action of some lake and river waters on lead, states that metallic lead, in a globule as large as an ordinary pinhead, was obtained from one quart of Cochituate water after 24 hours of exposure to lead. Dr. Webster also found the Cochituate water act considerably on lead.[1] Dr. E. M. Greene has examined the Cochituate water, drawn through several faucets of different dwellings in Boston, as also of the dwellings of Cases 63–69, and he found lead in every case.[2]

In regard to Professor Horsford's second argument, namely, the protection afforded by the insoluble coats formed in the pipes, considerable has already been said. This, however, is a very important subject to discuss, inasmuch as it is the foundation upon which those who favor the use of lead pipes based their opinions, and hence some more space must be allotted to it.

Thus Professor Christison frankly acknowledges[3] that he has been misled by his method of experimentation, and where he predicted that the water would be safe for use, as in the Dumfriesshire family, the facts proved to be altogether the opposite.

Dr. Horsford states[4] that the nitrates and chlorides promote the solu-

[1] Boston Water Supply Pamphlets, 1845–50.

[2] *Boston Medical and Surgical Journal*, Nov. 28, 1889.

[3] *Trans. Royal Society of Edinburgh*, 1842, p. 266.

[4] *Proc. Amer. Acad.*, 1848, p. 98.

tion of some coats formed on lead. It need only be added that CO_2 in the water also dissolves the coating of lead carbonate (for example of which see Cases 135–137), and does it not appear plain that these "insoluble" coats can not serve as a protective to any appreciable extent? And when we reflect that these solving agents can be produced by decomposition of animal or vegetable matter, and can, therefore, at any time be produced or deposited in the water, and that, as aforesaid, increase of temperature increases the solvency of the lead salts, it becomes clear that such "insoluble" coats not only fail to act as a protective, but that they multiply the danger to lead poisoning, since they consist of an enormous amount of lead salts lying in wait for an opportunity to be dissolved and thus consumed.

The London water, being hard, was considered safe, as it was said it had no action on lead at all. In 1843, it was discovered that the dogs of Her Majesty's Kennel sickened and died in consequence of drinking water that flowed through a lead tube. This led to a vigorous action, although half of the inhabitants of that great metropolis might have been suffering from the same cause.[1] Again in 1859 the great lead-and-water question was the subject of much public discussion in the columns of the London *Times*. The result was a general feeling that the public safety lay in the abolition of lead in the construction of cisterns and pipes for water supply. Some writers had gone so far as to recommend a prohibition by Government of such uses of lead.[2]

Dr. Hassall, the Analytical Commissioner of the London *Lancet*, in relation to the Thames and other waters, says, that from the number of samples of water, which he has received, containing lead, he is induced to believe that the metal is more frequently introduced into the system in this way than is commonly suspected. He further adds, so many well-ascertained cases of lead poisoning, arising from the use of water contaminated with lead, have occurred, that the use of lead for the storage and conveyance of water ought to be entirely discarded.[3]

Dr. W. Lauder Lindsay[4] states: It may admit of a doubt whether the opinion of Dr. Lambe, of Warwick, that *all* natural waters must be held to act upon lead, which therefore, is at *all* times and under *all* circumstances, a dangerous metal to have in contact with drinking-water, is not safer, so far as the public health is concerned, than the more modern idea that a small quantity of certain neutral salts acts invariably to prevent this action on lead. He has no desire to create unnecessary alarm, but he has a desire, he says, that chemistry should be more creditably represented in its relation to sanitary science, than it at present is in reference to the action of drinking-water on lead. Again he says:[5] Cases of lead poisoning on the

[1] *Boston Medical and Surgical Journal*, May 24, 1843.

[2] *London Medical Times and Gazette*, October 29, 1864; *American Journal of Medical Sciences*, January, 1865.

[3] *American Journal of Medical Sciences*, Jan., 1865.

[4] *The Edinburgh New Philosophical Journal*, N. S., Vol. IX., p. 245.

[5] *Ibid.*, Vol. X., p. 22.

small scale, or rather in a minor degree, are constantly occurring in all the large towns from the plumbeous impregnation of drinking-water. The medical man is often extremely puzzled to account for certain anomalous symptoms in his patients; and he puzzles himself in vain, until he at last bethinks himself of the assistance of the chemist who discovers lead in the drinking-water used. On talking the matter over, he says, with medical men in London and elsewhere, he finds the suspicion strong, though they are seldom in the position to prove indubitably the correctness of their suspicion, that many obscure cases of colic and other intestinal affections, as well as paralysis of the nature of lead palsy, sometimes going on to a fatal issue, are really due to plumbeous impregnation of drinking-water.

In 1858 Dr. Lindsay[1] laid before the British Association the records of a series of experiments and observations made by him during the previous year. His main or general results were tabulated in the following series of propositions:

1. Under certain circumstances pure and soft waters do not act upon lead.

2. Hard or impure waters, sometimes containing abundance of the very salts which are generally supposed to be most preservative or protective, do act on lead, and with same rapidity and efficiency as pure or soft waters. This was illustrated by the destruction of lead cisterns in the Murray-Royal Institution (a retreat for the insane of the middle classes) near Perth, of which Dr. Lindsay is the physician.

3. We are not in possession of any satisfactory information about the causes of the varying action, under different circumstances, of the water on lead: information that may be of any practical value in assisting either predicting or preventing lead-erosion or lead-contamination.

4. Experiments on the small scale, and for short periods are most fallacious, and frequently dangerous in regard to the conclusions thence to be drawn.

5. Contamination of water, both hard and soft, impure and pure, by lead is, in all parts of the kingdom, and under every variety of circumstances, the cause or source of various obscure diseases of man (and also, doubtless, of the lower animals), especially of the nature of dyspepsia and colic.

6. So uncertain is the action of water on lead, so impossible is it to predicate the nature or extent of that action under the varying mechanical and chemical conditions of water supply of houses and towns, so difficult is it to prevent the possible dangers, so numerous and excellent are the substitutes that may be provided for lead in the construction of cisterns and pipes, that it is desirable henceforth to abolish the use of lead as a means for the conveyance or storage of waters.

The late Dr. Dundas Thomson, President of the Metropolitan Associa-

[1] *American Journal of Medical Sciences*, 1868, p. 266.

tion of Medical Officers of Health, who had for many years given, as a chemist, great attention to the water supply says,[1] "It is impossible too strongly to condemn the use of lead pipes and cisterns. They should never be used for conducting or retaining water for drinking or culinary purposes."

Professor B. Silliman, Jr., of Yale College, says: "Considering the deadly nature of lead poison, and the fact that so many natural waters dissolve this metal, it is certainly the course of safety to avoid, as far as possible, the use of lead pipes for conveying water which is to be used for drinking."[2] Again he says:[3] "Thus pure water cannot be safely transmitted for the reason that it will become contaminated with lead, while the impure waters, which do not act so readily on lead, are by themselves not fit to be used for drinking and culinary purposes."

Drs. B. W. Richardson,[4] Thomson[5] and Fairclough[6] are among the many others that oppose the use of lead pipes for the conveyance of drinking-water, the latter believing that much of the anemia of town people is due to drinking water containing small quantities of lead.

* * * * * * *

Of late it has been discovered that many cases of lead poisoning so simulated various other diseases, especially those of the nervous system, as to be mistaken for them; the true diagnosis being established only by a chemical examination of the urine. The characteristic symptoms, such as the blue line on the gums, colic, constipation and emaciation, so dependent upon by the general physician, being absent, it is easy to see how such cases could be mistaken for other affections. I need not impress here the disastrous effects of not diagnosing and not properly treating lead-poisoning cases; sufficient has already been said. Only too frequently are such cases allowed to pass unnoticed. The following reports, together with what has been alluded to, may show that there are many hundreds of cases of lead poisoning, whether produced by drinking-water, or in some other way entirely unrecognized.

Dr. J. J. Mulheron, in his paper read before the Michigan State Medical Society, May, 1880,[7] states that lead affections are often confounded with rheumatism, and are treated without success until the patient goes to some sulphur spring and is cured. He cites several cases to support his statement.

Dr. S. G. Weber, of Boston, in his paper read before the American Neurological Association,[8] June, 1882, relates several cases, the symptoms

[1] The *American Journal of Medical Sciences*, 1865, pp. 265, 266.
[2] October, 1845, Boston City Documents on Water, 1844–45.
[3] B. Silliman, Reports, etc., Vol. I., 1848–65. Quebec waters.
[4] *Medical Times and Gazette*, London, Oct. 29, 1864.
[5] *Medical Press and Circular*, London, 1886, p. 73.
[6] *N. Y. Medical Journal*, Sept. 21, 1889.
[7] *The Medical Record*, 1880, p. 734.
[8] *Medical Record*, 1882, p. 20.

of which pointed strongly to myelitis, so that when they were first admitted to the hospital the diagnosis of myelitis was made. An examination of their urine revealed the presence of lead. The blue line on the gums was absent in most cases, and in only one case was the source of lead ascertained.

In a paper read before the same association[1] the following year, Dr. J. J. Putnam, of Boston, reports eight cases in which the examination of the urine showed the presence of lead, while the symptoms and clinical history were not such as are usually considered characteristic of lead poisoning; in fact simulated other types of disease. He also quotes a case reported by Dr. F. Minot (vide *Boston Medical and Surgical Journal*, 1881), in which the symptoms of lateral sclerosis were present to some degree. Lead was twice found in the urine. The patient improved materially under the use of iodide of potassium.

In none of the eight cases reported by Dr. Putnam, was the blue line on the gums to be seen. All characteristic symptoms, *i. e.*, colic, emaciation, atrophic paralysis and cerebral symptoms were absent, the diagnosis being established only through the examination of the urine after the administration for a few days of iodide of potassium.[2]

Dr. James H. Lloyd, of the nervous and insane departments of the Philadelphia Hospital, has noticed that locomotor ataxia is very frequently simulated by cases of lead poisoning, and one can hardly be distinguished from the other. He also quotes several cases of the kind.[3]

(*To be continued.*)

A Test for Human Semen. Florence devised the following method of identifying human semen, even when two and a-half years old. His reagent consists of a solution of 1.65 grammes of potassium iodide and 2.54 grammes of iodine dissolved in 30 c. c. of distilled water. When a drop of the liquid obtained by moistening a seminal stain is placed side by side with a drop of this solution on a slide, large numbers of peculiar brownish-red pointed crystals appear. They are rhomboidal and closely resemble hemin crystals. Another method is that of Whitney—A drop of fluid obtained from the moistened stain is evaporated and fixed by a flame. The same is stained with eosin and methyl green and mounted. At the base of the head of the spermatozoa is a hemispherical portion which stains a deep green, while the anterior part and tail stain red. This serves at once to identify them, as there is no other oval spore or cell which has an eccentric hemispherical nucleus. He furthermore claims that the test proves them to be human, as in no other animal is there a deep staining.

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[1] *Ibid.*, June 30, 1883.

[2] All the chemical parts of the investigation were performed by Professor E. S. Wood, of the Harvard Medical School.

[3] *Medical News*, Phila., April 2, 1892.

TALKS TO GENERAL PRACTITIONERS.

A polyclinic in print embodying simple lessons in so much of the newer methods and procedures in the specialties as it is important and practicable to teach in this way to physicians generally; and the occasional rehearsal of old but neglected truths.

DIAGNOSIS OF GONORRHEA (GONORRHEAL URETHRITIS).

BY J. D. THOMAS, M.D.,

Professor Genito-Urinary Diseases Western Pennsylvania Medical College (Medical Department Western University), Pittsburg; Genito-Urinary Surgeon to South Side Hospital, etc.

THE diagnosis of an acute case of gonorrhea is usually a simple matter, more especially if it is a first attack. There is a history of intercourse, that is probably impure, followed in a few days (three to ten) by a mucopurulent, then a purulent discharge, the discharge being preceded by an itching, then a burning at the meatus with an unusual desire for intercourse. If the urethritis is of a severe type, there is a marked swelling of the urethral mucous membrane; the stream during urination is small, causing excruciating pain from the peripheral pressure produced by the expulsive efforts of the bladder muscles. There may be in such cases considerable edema of the prepuce and a "porkiness" of the entire penis due to lymphatic involvement. The discharge occasionally has a greenish tinge from slight admixture with blood. Chordee is another accompaniment, causing much discomfort. When the more acute symptoms subside, this complication disappears, but if there is an attempt at organization of the inflammatory product effused into the corpus spongiosum the chordee is more or less persistent.

In milder cases the symptoms are much modified, and as long as the deep urethra (membranous and prostatic portions) remains uninvolved very little complaint is made, the principal discomfort being the filthy condition engendered by the discharge.

In very many cases, sooner or later after the first week, the disease invades the deep urethra. This is recognized by a desire upon the part of the patient to urinate often—the desire being imperative. There is straining at the end of (terminal) urination, and this bearing down is sometimes accompanied by the passage of a few drops of blood, the result of capillary bruising. If these symptoms are very marked, it is well to bear in mind the possibility of a prostatitis which may be excluded by palpation with the point of the finger introduced into the rectum. In mild cases of deep urethritis the only additional symptom is the frequent desire to uri-

nate, but the desire is not imperative, for many of the patients can retain the urine for some time after the desire is first experienced.

The two-glass test is quite reliable when the deep urethra is acutely inflamed, for at this time the inflammatory débris is abundant and passes backward into the bladder, and gives the urine voided in the second glass that opaque, lumpy appearance so characteristic. Whilst penning these lines a patient presents himself who has had a discharge for eight days and complains to-day, for the first time, of a desire to "pass water every half hour." The two-glass test in his case is very marked. This opacity must not be confounded with the opacity of phosphatic urine, which clears up on the addition of a few drops of acetic or nitric acid. The two-glass test is not to be relied upon in the later stages, for at this time the secretion is small in amount and is flushed away with the first gush of urine.

When a patient has had one or more gonorrheas (pluri- or multigonorrheas) it is not always an easy matter to say positively that the present fresh discharge is due to a new infection. Many so-called new claps are not veritable new claps but are of that class called "bastard." A man who has once had a gonorrhea has, as a result, a permanently damaged urethra. The infectious element may, of course, have disappeared, but there remain occluded follicles, indurated patches, cicatricial areas, hyperesthesia, neurasthesia, etc. One or more of these sequelæ may keep up an intermittent discharge, or start up a discharge with the least excitement. It is said that gout, rheumatism, urinary crystals, menstrual fluid, etc., will produce a *de novo* urethritis in some men. In my patients they do not. In my experience a discharge from the meatus of a gouty patient means the same as a discharge following a debauch or excessive venery. It means that the patient has had, at some time in the past, a urethritis due to the gonococcus or (exceptionally) a traumatism. In a healthy urethra none of these causes will produce a discharge. A sexually vigorous man consulted me in behalf of his wife who remained sterile. He stated that for the two years since his marriage he had not passed one day without indulging in coitus. The menstrual fluid did not injure his urethra; he had never had a gonorrhea. Leucorrhea or a non-specific purulent discharge from the vagina will not produce a discharge in a man with a sound urethra. I had a female patient under my care who had a chronic abscess in the neighborhood of the uterus, for which she declined having anything radically done, which discharged into the vagina continuously; but this discharge did not produce a urethritis in the husband. In these cases our diagnosis again depends upon the history elicited. If the discharge is rather free and follows a suspicious cohabiting, the diagnosis of gonorrhea is justifiable. There is, however, the possibility of the presence of the gonococcus in the urethra from the previous gonorrhea. If confrontation could be practiced the diagnosis would be simplified. In cases where the amount of discharge is small, if the suspicious intercourse was preceded by, or accompanied, a debauch, the diagnosis of simple urethritis

would probably be correct. Excessive intercourse alone may start up a non-gonorrheal discharge. A patient, 44 years old, married for a number of years, had a gonorrhea 22 years ago which lasted for one year. Under an unusual temptation he indulged in coitus three times during the space of half an hour. In two days afterwards, very much frightened, he consulted me on account of a discharge. There was very little disturbance. the discharge was muco-purulent and small in amount. My diagnosis was simple urethritis, which was confirmed by the microscope. The use of an astringent injection dried up the secretion in three days. An examination then made demonstrated the presence of a stricture, three inches from the meatus, for which he is now being treated.

The possession of a microscope with a $\frac{1}{12}$-inch oil-emersion lens is necessary to make a quick and correct diagnosis.

DIAGNOSIS AND TREATMENT OF INTERNAL PELVIC HEMORRHAGE.

BY EDWARD E. MONTGOMERY, M.D.,

Professor of Gynecology, Jefferson Medical College; Gynecologist to Jefferson and St. Joseph's Hospitals, etc.

In our last talk we discussed the subject of external hemorrhage from the genital tract. It seems a fitting corollary and an advance in this discussion to take up the subject of internal hemorrhage. Internal hemorrhage may be produced by engorgement of the pelvic viscera resulting in ovarian apoplexy or ovarian hematoma or tubal hemorrhage. Rupture of varicose veins, causing an internal hemorrhage or hematocele, either free or a circumscribed collection beneath the peritoneum in the cellular tissue. The term hematocele, as now employed, covers both these conditions, as the internal hemorrhage, if the patient survives, soon produces sufficient irritation of the peritoneum to result in its being encysted and confined within the most dependent portion of the peritoneal cavity. The most frequent cause of internal hemorrhage from the genital tract is tubal gestation. This may result in the escape of the fetal sac and the discharge of blood into the peritoneal cavity through the abdominal end of the tube, known as tubal abortion, or the sac, at any time between the third and twelfth week may rupture, permitting its partial or complete escape into the peritoneal cavity and the discharge of a large quantity of blood. This bleeding may be so severe as to lead to the death of the patient immediately from shock, or within twenty-four hours. The rupture more fortunately, however, may take place through that portion of the tube uncovered by peritoneum and into the folds of the broad ligament; where the hemorrhage is necessarily circumscribed by the space into which it takes place. The clot formed

compresses the bleeding vessel and leads to its arrest before fatal hemorrhage occurs. The pressure, however, may be so great as to lead to a secondary rupture and the escape of the contents into the peritoneal cavity, when bleeding may continue and death occur. Such patients may have no warning, the woman supposing herself to be pregnant normally, until there is a sudden agonizing pain, not unfrequently so severe as to lead to unconsciousness. She falls in a swoon, recovering from this to pass into others, and is bathed with a cold, clammy perspiration, the face is pale, the countenance pinched and anxious, the breathing rapid, the pulse feeble and possibly imperceptible. Dissolution may be imminent. The examination over the abdomen reveals nothing. Blood in the peritoneal cavity is not recognizable by bimanual palpation. It is only after it has become clotted and encysted that we recognize its presence. When this occurs the great danger has passed. A patient presenting such symptoms would always awaken in the mind of the physician the suspicion of an ectopic gestation, and particularly if this is associated with a bloody discharge from the uterus. The patient probably believes that an abortion is beginning. Such a case requires most careful and judicious management; an open vessel is bleeding in the abdominal cavity. To combat the faintness and depression by active stimulation, hypodermic injections of strychnine, and other measures to increase the heart's action is to drive out possibly a clot or a plug that is forming in the bleeding vessel and increase the amount of blood the patient loses. The faintness, the debility, is Nature's method for arresting the hemorrhage. If the patient can be tided over the time with a feeble pulse, without stimulation of the circulation, there is a possibility that a clot may form and the hemorrhage be arrested. Until measures can be taken to secure the bleeding vessel, the patient should be kept perfectly quiet, should not be permitted to move a muscle, should have an ice bag applied over the abdomen, and ice suppositories introduced into the rectum. The pillow should be removed from beneath the head.

If a patient has been very greatly depressed and an operation is decided upon, as soon as the preparation has been accomplished, the patient should be given a hypodermic injection of strychnine, and the loss of blood supplied by intravenous injections of salt solution which may be carried on while the abdomen is being opened. The bleeding vessel secured, the abdominal cavity is quickly irrigated, the clotted portions of the blood bailed out with the hand, not being particularly careful to remove all the fluid, whether blood or salt solution. Saline irrigation used hot is almost as efficient as intravenous injection, and with a large amount of it in the abdominal cavity, the patient will be able to absorb or take up the portion of blood that may remain. The operation consequently should be an expeditious one, rapidly securing the bleeding vessel; not to thoroughly cleanse the peritoneal cavity; dipping out the clotted blood with the hand, irrigation with salt solution; the wound closed and dressed, patient placed in bed with the limbs bandaged, and the pelvis elevated, in order to give the

heart as little work as possible in supplying with blood the vital centers. In patients where the blood has escaped for some time, the condition becomes chronic, operation is not always necessary, as under judicious management the blood will be absorbed and the whole collection disappear. The blood collection, of course, first undergoes a process of being encysted, then organization, and finally the collection is removed. This process, however, requires a considerable length of time. It may be interrupted by various accidents, increasing the possibility of infection of the collection, so that while operation as we have said is unnecessary, it is still advisable, for the reason that it removes the possibility of accidents, it facilitates the removal of the collection, relieves Nature of the necessity for its absorption and frees the patient from the thickening and exudations with more or less of fixation of the organs, which are likely to result. With the change which takes place a week or ten days after hemorrhage has occurred, the vessel has been sealed up and it is unnecessary that the peritoneal cavity should be opened by an abdominal incision. Indeed, where the blood is encysted in Douglas pouch it seems preferable to respect the barriers Nature has arranged and open through the post-cervical cul-de-sac, making a free incision, evacuating the contents of the pelvis, irrigating the cavity, scraping out with the finger the adherent clots and packing with iodoform gauze, thus making sure of retaining a good free opening. This procedure permits the evacuation of the collection without the more serious abdominal incision, even permits the turning down, ligation and removal of the tube or fetal sac. This procedure is particularly valuable in cases of circumscribed hematocele, where the collection has been poured out into the broad ligament. Here it may be reached by a vaginal incision without opening into the peritoneal cavity and with much less danger and discomfort to the patient than would result from an abdominal incision. This plan of procedure, however, by the vaginal route is only applicable to those cases in which the collection is old, having given time for hemorrhage to be arrested and the bleeding vessel occluded. In recent hemorrhage where we have reason to believe that the vessel is still bleeding or likely to bleed, the abdominal incision should be made to permit the inspection of the cavity and the certain control of the bleeding vessel.

GENERAL CONSIDERATION OF MUCOUS MEMBRANES OF THE UPPER RESPIRATORY TRACT.

BY D. BRADEN KYLE, M.D.,

Clinical Professor of Laryngology and Rhinology in the Jefferson Medical College, Philadelphia; Consulting Laryngologist, Rhinologist and Otologist to St. Agnes' Hospital; etc.

BEFORE taking up the subject of mucous membrane lesions, in order to make clear reflected and dependent lesions, it is necessary to thoroughly un-

derstand the normal histology and physiology of mucous membranes in general.

The mucous membrane of the respiratory tract and in fact all mucous membranes are dependent structures and are influenced directly by local irritants, or the local irritation may be due to some constitutional diathesis. These facts then necessitate a thorough knowledge, not only of the histology and pathology of the mucous membrane, as well as of the adjacent and allied structures, but also of remote organs which through their deficient or perverted function may produce secondary lesions of the mucous membrane. The rational treatment of diseases of the upper respiratory tract then involves a knowledge not only of special structures, but of the entire body, the peculiar interrelation of each individual part and especially the peculiarities of individuals.

Mucous membranes, as has been said, are dependent structures, that is, they are supported entirely by underlying connective tissue, on the character of which the membrane's function and its resistance to disease largely depend. If this structure be fixed, as is the case in the bony frame-work of the nose, when the mucous membrane is engorged or inflamed, the distension must necessarily be in one direction, *i. e.*, toward the cavity, thus necessarily lessening its lumen. This is true of almost the entire upper respiratory tract, as the membrane is backed up either by fixed bony or firm cartilaginous frame-work.

Inflammatory processes of the mucous membranes rapidly pass into the second or exudative stage. This is due to the fact that the blood vessel has very little connective tissue support, allowing rapid distension and early exudation. Any interference with the systemic circulation, either arterial or venous, in which the blood is either actively or passively in excess in the tissue, may bring about almost the same clinical phenomena as observed in acute inflammation. The prognosis and treatment would be vastly different in the two conditions. In other words, the lesions involving the mucous membrane of the upper respiratory tract may be divided into two general varieties, primary and secondary. By the first is meant such lesions as are situated at the site of the inflammatory process and are directly associated etiological factors. And under the second variety are grouped those processes which are forced on the tissue, the lesion being elsewhere. For example, a lesion of the right side of the heart causing passive pulmonary congestion, thereby slowing general venous return, will produce a cyanotic condition of the mucous membrane. It is well known that mucous membranes when subjected to repeated engorgement tend to remain passive or distended owing to the fact of their lax structure.

A similar process can be brought about by any systemic lesion such as interstitial nephritis and contracted kidney, hob-nail liver, or any organic involvement by which the general circulation is obstructed, and the blood dammed back on the mucous membrane surface where the continued intravascular pressure produces atrophic changes in the connective tissue and essential structures.

Due to faulty elimination either through the intestinal, urinary or respiratory tract irritating material will be found in the blood and the mucous membrane being a dependent and sensitive structure will very soon show the effects of such irritants. This is epecially illustrated in the gouty and rheumatic diatheses. In such cases how useless it would be to direct the remedial agents toward the local manifestation without first correcting faulty elimination.

(*To be continued.*)

PRACTICAL METHODS OF DETERMINING THE BOUNDARIES OF THE STOMACH AND THE STATE OF ITS MOTOR FUNCTION WITHOUT THE USE OF THE TUBE.

BY BOARDMAN REED, M.D.

Dilated, as well as displaced, stomachs and intestines are exceedingly common especially in women. Gastric dilatation always impairs the health more or less, and even displacements are apt to cause obstinate constipation and troublesome forms of indigestion. They are often associated with a downward displacement of the right kidney if not of both, and with more or less serious nervous derangements, such as insomnia, nervous depression, cardiac palpitation, etc. None of the widely prevalent diseases are so often overlooked by otherwise skillful practitioners, and the reason is, that until within a few years little or no instruction was given as to the diagnosis of them in the medical schools of this country.

Deficient muscular power in the stomach walls is another very important pathologic state which always precedes the idiopathic forms of dilatation and generally results sooner or later when there is a marked sagging downward of the organ.

Normally the stomach should be in contact with the diaphragm above and to the left, thus in close relation with the heart and left lung. Below, its lower border, where in contact with the anterior wall of the abdomen, should be two inches at least above the level of the umbilicus. In what Ewald calls megalogastria, or hypertrophy of the stomach, the organ may even extend below the navel without apparent impairment of its functions, because its muscular power remains good, but such a condition cannot be called normal. In perfectly healthy young persons the lower border is not usually below the middle point between the ensiform cartilage and the navel.

Mapping out the boundaries of the stomach will suffice to establish the diagnosis of gastric enlargement or displacement, and then by percussion

and clapotement (that is, eliciting a splashing sound) even the motor power of the stomach can be approximately determined.

The diagnosis of these various morbid conditions can be made with a great degree of accuracy by the aid of various intragastric instruments, but I shall describe to you here a simpler method which will afford practically correct results in nearly all cases.

For this you will require no instruments except a good amplifying stethoscope, together with a percussor and pleximeter, and the last two may be dispensed with by those who are well-trained in delicate percussion. The patient can be examined best when the stomach is empty at first, and it will simplify matters to have the colon also emptied beforehand.

In a thorough examination of the abdomen you will always begin with a careful inspection of the region uncovered. This will often afford valuable information as to tumors, deformities, fat deposits, tenseness or laxity of the abdominal muscles, etc. For the purposes now under discussion, a glance at the abdomen, especially with the patient standing, will frequently alone raise a strong presumption that there is a splanchnoptosis or falling of the abdominal organs generally. When there is a marked bulging forward below the navel with unusual flatness or depression of the parts above, you will be almost sure to find that there has been, at least, either an enlargement or dropping of the stomach (gastroptosis) and in consequence a pushing downward of the transverse colon with usually a large part of the small intestines. Yet the stomach may be dilated or displaced without there being any such visible changes.

Next, with the patient lying on a couch, the head and shoulders well raised and the knees moderately flexed, you will proceed to practice clapotement and percussion. Placing a pillow or other support under the knees will assist in relaxing the abdominal muscles. When these are still tense, as often happens in nervous persons, knead the abdomen very gently with well warmed hands for a few minutes. Clapotement presupposes fluid in the stomach and very often fluid will be found there when the patient first comes for examination. While the patient is still recumbent tap lightly over the upper abdomen with the finger tips held perpendicularly to it, in order to elicit a splash, provided fluid be present. If you succeed in getting the splashing sound more than three hours after a light, or than six hours after a full, meal, this would not only point to slow digestion or deficient motility, but would also afford indications approximately as to the position of the greater curvature or lower boundary of the stomach, and thus avoid the necessity of careful percussion over so large an area. Failing to obtain a splash may signify (1) a very thick abdominal wall because of excessive adipose tissue; (2) normally strong muscular power or resiliency in the stomach walls; or (3) the absence of fluid from the stomach. But do not ask the patient to drink water till later. It is better to have the stomach empty when you begin percussion if possible.

With the patient recumbent, percuss very lightly from above downward

in the left parasternal line, or in several lines between the median and the nipple line, noting first the level where at the right the cardiac dullness changes to the modified dullness of the left lobe of the liver overlying the stomach, at the left to the tympanitic sound heard immediately over the stomach, whenever this contains much gas. Then, proceeding on downward, note the line where the low pitched tympanitic sound of the stomach changes to the similar but higher pitched sound over the transverse colon. You may possibly be able to determine again where this last changes to the still higher pitched tympany over the small intestines, though very often there is no appreciable difference in the percussion notes over the different portions of the intestines.

When the stomach contains considerable gas, this single procedure is sometimes sufficient for the expert, though it is well to confirm the results by percussion with the patient in a standing position before and after drinking one or two glasses of water in the manner to be described further on. If there be little or no gas in the stomach with a resulting lack of tympanitic resonance, inflate it artificially by administering a teaspoonful of bicarbonate of soda dissolved in a glass of water and immediately afterward forty drops of dilute HCl, or half a teaspoonful of tartaric acid in half a glass of water. Smaller quantities of these may often suffice, and in persons with very large stomachs greater quantities may be necessary.

More delicate and precise results can be obtained by auscultatory percussion and auscultatory friction, with the help of a good phonendoscope or binaural stethoscope. In auscultatory percussion, the ear pieces of the instrument being in their places, the other end is held by an assistant or by the patient in the desired locations, while the examiner percusses lightly in various directions from it. The differences in pitch and quality of sound are thus greatly exaggerated.

In auscultatory friction the instrument is held in like manner while the finger tip, pencil or other similar object is rubbed over the skin. The sound thus produced is heard distinctly so long as the rubbing is made over the hollow organ over which the stethoscope is placed, and not moved more than two or three inches away from it, while upon crossing the boundary to another organ even an inch away, it is no longer heard. Ewart, of London, has recently confirmed the importance of this sign in the differentiation of the abdominal viscera.

For further confirmation you may percuss the abdomen as before, except that the patient is standing. Note the results thus obtained and repeat the percussion after the patient has ingested two glasses of water. More forcible percussion will often be necessary in this position to bring out clearly the different sounds.

Compare the findings from these various percussions under the following different conditions :

I. The stomach and transverse colon being both empty except gas, with the patient recumbent, tympanitic notes, nearly always different in pitch

and quality, will be heard over these two viscera, while occasionally a still higher pitched sound may be heard lower down over the coils of the small intestine. The boundary above, between stomach and heart can then be generally made out except in fleshy persons (who are not often sufferers from serious gastric disease) or when there is very little gas in the stomach. In these cases inflation will be necessary and this will also greatly intensify the difference between the percussion notes over the stomach and colon. The inflation may be made by the method already described, or by forcing air in through a tube.

II. With the same conditions except that the patient is standing, the results should be much the same, though since the gas rises to the highest part of the stomach, there is often a greater tympany there. This facilitates the determination of the boundary between the stomach and heart and between the stomach and lungs. If there should be even a very moderate amount of fluid remaining in the stomach, it will give a narrow zone of dullness at its lowest part.

III. With the colon empty and the stomach containing two glasses of water, you will have the same findings as before while the patient is recumbent, except that the tympany over the stomach should be more marked even without inflation, but upon the standing position being assumed, the condition is immediately and strikingly changed. There is now a decided zone of dullness across the lower portion of the region over the stomach, while the note over the intestines remains tympanitic as before.

After finishing percussion further useful information may be gained by trying clapotement again with the two glasses of water in the stomach. While the patient is lying on the back, as before described, make repeated tappings with the fingers over different parts of the epigastric region. If a loud splash is easily obtained over a wide area, the stomach walls are atonic —its motility bad. If the organ has been found to be enlarged, there is gastric dilatation which is more or less extensive according to the position of the lowest level at which the splash can be produced. The use of the phonendoscope will enable you the more readily to determine this level, though you may sometimes be misled by it, since a splashing sound may often be heard through it at some little distance from the place where it is actually produced. Clapotement is less reliable than percussion for the determination of boundaries, but the two methods should both be employed when accuracy is desired so as to have one confirm the other.

In a patient with a not too sensitive intestinal mucous membrane, you may determine the position of the colon in its various parts (whether it be in contact with the stomach, or has dropped down below the latter) by filling it from below with a warm weak solution of salt while he lies on the back or right side with the hips somewhat elevated. By injecting enough of the salt solution (or any fluid which can be retained a few minutes) you may be able to obtain a dull percussion note, or by auscultation with the phonendoscope while you tap over the different parts, you may hear gurgling

or slight splashing sounds over the course of the colon, especially if it be dilated. For the success of this procedure it is necessary that the stomach should be wholly empty, so that any splashing sound could arise nowhere except in the colon or cecum.

Having by the methods already described determined the boundaries of the stomach, it is possible by similar means to obtain sufficiently reliable information concerning the motor function of that organ for ordinary clinical purposes. This comparatively simple method of determining the motility of the stomach was originally described by me three years ago, and so far as I can learn, its practical usefulness has never been disputed.[1]

As already mentioned, the splashing sound heard over the partly filled stomach indicates roughly the degree of relaxation of the muscular walls as well as the extent of a decided dilatation. But by percussion and clapotement together we may learn with a reasonable approach to certainty how long a time is required for the organ to empty itself after various kinds of meals and even after different foods. Knowing exactly where the lower boundary of the stomach is in any given case, whenever it is desired to make the test, we let the patient stand, at the same time leaning a little forward, and then percuss over the region corresponding to the lower segment of the viscus. If there should be even an ounce or two of fluid present, a narrow zone of dullness can in this way usually be demonstrated. With a large portion of the meal still in the stomach this zone of dullness would be marked and easily manifest. Besides, with dilatation or even a moderate motor insufficiency, there would be confirmatory evidence from the splash obtainable in such conditions with the patient recumbent, even though there were not more than half an ounce of fluid present. Since it is in atonic stomachs especially that such tests are most needed, the practicability and value of this, which I may claim as my own method, are apparent.

After first fixing precisely the boundaries of the stomach, you have only to make this simple test 2 hours after a very light (Continental) breakfast, 4 to 5 hours after a mixed breakfast including meat or eggs, or 6 to 7 hours after a hearty dinner. If it is empty at such times, you may infer a good motility. If you find the fluid persisting for several hours longer, you will recognize decided motor insufficiency and if with this there is also enlargement and a loud splash over a wide area, you can safely diagnosticate dilatation. There are all degrees of this condition, and so long as there is no stenosis of the pylorus, they are all curable by non-surgical measures.

[1] The Diagnosis of Changes in the Size, Position and Motility of the Stomach in Cases Where Intragastric Instruments Cannot be Used. By Boardman Reed, M.D. *Med. News*, January 18, 1896, and *Berl. klin. Woch'schrift*, 1896, No. 43.

SELECTION AND TRANSLATION.

CHRONIC SYPHILITIC ULCERATION OF THE FOOT AND ANKLE.

BY J. GARLAND SHERRILL, M.D.

THE case occurred in a white woman, aged thirty-nine, and was of eight and a-half years' duration and dated from pregnancy.

As will be observed by the accompanying illustrations the foot is markedly hypertrophied, which appears to involve not only the skin but also the subcutaneous cellular tissue, and from all outward appearances the bone also participates in the enlargement. The measurement of the dis-

eased foot at this time was ten inches long, eleven inches in diameter at the instep, and twelve inches around the heel, while the healthy foot measured nine inches in length, eight inches at the instep and eight inches at the heel.

The appearance of the foot and leg, with the punched-out ulceration, bogginess of the part and the little tendency to healing, led me to suspect syphilis as the cause of the trouble, notwithstanding the absence of a specific history. The ulcers were more ragged and deeper than usually found in lupus and the integument did not have the dark reddish discoloration usually seen in the latter disease.

On January 1, 1898, the patient, becoming discouraged at the prospect of cure, consented to an operation, and amputation was performed at the lower third of the leg January 27, 1898. Complete healing of the amputation wound took place in sixteen days and the patient began to improve immediately after the operation was performed. On the second day after removal of the limb she was placed upon a preparation of mercury with marked improvement in general health, and at the present time she is in excellent condition.

Examination of the specimen reveals masses of gummatous tissue scattered throughout the cellular tissues. There was no involvement whatever of the bone or deeper structures of the foot, save a slight thickening of the muscular tissues.

It appears from developments in the case that this is one of those rare conditions which occur late in syphilitic patients who have not followed a well-advised plan of treatment for this condition.

The amputation was made because of inability to obtain permanent healing of the diseased tissue, to remove the constant source of irritation and drain upon the vitality of the patient, and also to remove a useless member, as the foot had become so stiffened and so large that it was of no service whatever.—*Medicine.*

ON ARTIFICIAL STERILITY. AN ENDEAVOR TO ESTABLISH INDICATIONS FOR PREVENTING CONCEPTION.

BY N. P. MARJANTSHIK, M.D.

Translated by Dr. A. Robin, especially for the INTERNATIONAL MEDICAL MAGAZINE, from *Medicinskoe Obosrenie.*

I INTEND to say a few words about a subject considered immodest even among physicians. The physician concerns himself with all the needs of the human organism, and apparently such a relation should not exist to a subject of even less importance having only a remote connection with the health of the organism. But reality shows something different, at least one is led to think so judging from the fact that the literature on this question is suppressed. Not till the end of the eighties of our century, did papers, devoted to the subject which especially interests us, make their appearance, and after the happy debut of Mensing, a series of papers

on this question appeared in Germany. However, the view held on the discussion of this subject in the press is shown by the numerous attacks against Mensing; also by the fact that the author himself ventured to speak of this subject only under a pseudonym—Hasse—giving his right name in the later editions only.

Notwithstanding the series of papers which followed Mensing's works in the German literature, that of other countries followed his lead but slightly, and the text-books on gynecology and obstetrics continued to pass the subject unnoticed. The first attention paid to it was in the manual of Treub (in Holland). In our country I heard for the first time the open defense of artificial sterility in certain cases, by Professor Dm. Osk. Ott, at the end of eighties or the beginning of nineties at the session of the St. Petersburg Obstetric and Gynecologic Society. Last year Professor Tolotshinoff also devoted to it a few lines in his text-book. With all this the literature on this subject is exhausted. At the same time one cannot really but wonder at this meagre literature. There were worked out indications for operations which subject the life of the mother to great danger, as Cesarean section, or crippling her for life as symphyseotomy, or endangering the life of both mother and child, as induction of premature labor, especially the artificial, so-called legal, abortion (here the danger was especially great prior to antisepsis), but no one said a word concerning artificial sterility in connection with these other means. It is sufficient for every obstetrician to take at random several cases in his practice, cases which were conducted on the old principles, to convince himself of the necessity of exact indications for artificial sterility and the widest propaganda of *healthy* means for its accomplishment in well-defined and appropriate cases. The affair is left to take its own course, and in cases in which the health of the woman is threatened by pregnancy or labor, the discussion at present is of an indifferent character.[1] Let her become pregnant even if she should not; we will produce, when necessary, an abortion or induce premature labor, or perform a Cesarean section. In other instances, the woman, advised by her intimate friends, makes liberal use of injurious means of preventing conception. It is necessary to put the affair on the right track; it is necessary that physicians, led by proper indications, should assert their influence in such cases.

To point out briefly the indications for the employment of means for producing artificial sterility is the modest object of my short paper.

I will begin with the *narrow pelvis*. At present, in absolute narrowness of the pelvis from whatever cause (swelling, occluding it, spondilolistesis, rachitic changes, etc.), if pregnancy exists, a Cesarean section is performed when it is nearly at term, or artificial abortion in the earlier stages. Not a word is spoken of the relief of such a woman from the necessity of an operation which threatens her life. True, the Porro operation is also intended to remove the possibility of future conception, but, in the first place, it is performed only after the life of the woman has been suspended on a hair during the Cesarean section; second, thanks to the modern enthusiasm for operating, it is preferred to subject the woman to a second Cesarean section rather than perform a Porro; third, this operation depriving the woman of her uterus, does not remain without some influence on her general health; and, finally, this operation of such a serious nature

[1] The advice of some not to live with the husband cannot be taken into consideration, for it is only very seldom that it can be followed.

does not always guarantee that there will be no possibility of future pregnancy, and in this case of a more dangerous character—extra-uterine.[1] Moreover, however noble the idea may be of giving a child to even such a mother (though we must refrain from doing this before we consult the mother as to whether she desires to expose herself to such danger); however good may be the results of Cesarean section at present, we will not for a long time to come, if ever, be in the position to create favorable conditions for a Cesarean section in every place of our broad country, conditions at present in the possession of clinics and well-established hospitals only. Therefore, it is my sincerest and profoundest conviction that in such cases there should be a wide application of means to prevent conception.

The question as to the relations of pregnancy to heart disease and the influence exerted by each on the other stands at present as follows: Under the influence of pregnancy chronic heart diseases assume a more rapid and fatal course.

On the other hand the latter do not remain without an unfavorable influence on pregnancy, causing in a great many instances premature expulsion of a dead child, in others interrupting pregnancy in the beginning before the embryo is viable.[2] There is no wonder, therefore, that Peter absolutely prohibits marriage to any girl suffering from heart disease, and Jaccoud—to every girl who had prior to the contemplated marriage attacks of loss of compensation. I think that we are hardly able to deprive a girl of the possibility of entering into matrimony, and is it not possible for us in such cases to bring about results contrary to our wishes, as is feared by Jaccoud, who says: "Se le mariage est ardemment désire, il ne fau point s'y opposer, dans la crainte de pronoquer une syncope, c'est-á-dire l'accident le plus grane que l'ou voullait éviter"? It is far more reasonable also here to apply the means leading to artificial sterility. If we reason thus with regard to heart disease, taking mostly into consideration the health of the mother, how much better application will our remarks find in the case of women suffering from tuberculosis of the lungs, where the interest of both mother and child are equally concerned. The old view that pregnancy inhibits the progress of consumption, that during pregnancy the woman gets even better, has become obsolete. The recent statistics clearly show that pregnancy, instead of holding back, favors the rapid course of the disease, and if pregnancy fails to do it, labor, especially the period after confinement, will surely accomplish it. What concerns the offspring, besides the considerable number of miscarriages and premature births, the tuberculous give birth in the majority of instances to a scrofulous generation, many children dying within the first five years from tuberculosis. Have we the right to subject to a great danger the life of a newly-married girl with incipient tuberculosis (who, in fact, should not get married at all, according to the advice of Spiegelberg); have we the right to permit her to conceive, and does humanity need that debilitated, sickly generation, only an insignificant portion of which survives the critical period of infancy to enter into life, at best, as candidates for consumption at the first favorable instance. No doubt, artificial sterility of the woman will also in this case be a salvation for both her and humanity.

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[1] Cases of Koeberle and others.

[2] That influence, it is true, is quantitatively different in different kinds of heart trouble and valvular disease, but only *quantitatively*. In general, it is bad in all cases.

Diseases of the kidneys (Bright's disease) and diabetes often complicate pregnancy. Nature herself endeavors in many cases to aid the pregnant woman, and pregnancy is frequently interrupted. Physicians follow the path marked out by nature, and inflammation of the kidneys complicating pregnancy is recognized by all authorities as an important indication for artificial abortion or premature labor. From this there is only one step to the question, which unfortunately is so seldom asked, what is to be done in cases in which inflammation of the kidneys precedes pregnancy? I think beyond doubt that the only answer to this question can be: prevent the advent of pregnancy. Why should we aggravate the morbid process in the kidneys by a new and such a serious condition as pregnancy, and then, with the view to remedy it, subject the woman to harmful operative interference, when the most natural way would be to give a chance for the inflammatory process in the kidneys to heal without complicating the healing. When a women nurses the child we observe a very interesting phenomenon: all her sexual functions are concentrated upon this one process—nursing. Menstruation ceases; conception does not occur. (I speak, of course, of the great majority, not considering the exceptions.) The uterus, allowed a rest of 10 to 12 or more months, assumes an entirely normal state in the majority of cases, and a freshly occurring pregnancy in such a uterus runs a normal course, without complications. This, however, is not observed in cases in which the woman for some reason does not nurse. The favorable condition for involution of the uterus is removed. She is still swollen, her uterus enlarged when menstruation occurs, soon followed by conception. How she fares under these conditions is known to every practitioner. Miscarriage in the course of pregnancy of such an imperfectly regenerated uterus is of frequent occurrence, and if the pregnancy is prolonged, the woman appears an absolute martyr during its entire course. She experiences all sorts of pain from the very beginning, the pains being worse than those of labor for they are futile. During the last months the woman suffers from false labor-pains, every week hoping for real labor as the only salvation. Such observations ought to serve us as an indication that every woman requires a rest of one to one and a-half years after each labor before she can again take up her destined task. Of diseases of the uterus in which conception is possible, but should be avoided, at least temporarily, I will mention prolapsus uteri. Under this I include those cases in which the cervix is so near the introitus that during pregnancy no elevation of the uterus takes place but, on the contrary, with each month it comes down lower and lower. Pregnancy terminates prematurely, and during labor the incomplete prolapse becomes complete. To sum up we come to the following conclusions:

Prevention of conception is indicated in many instances. *A*. Forever: (1) In narrow pelvis of the third degree. When the mother cannot or does not desire to run the risk of a Cesarean section. (2) In pulmonary phthisis. (3) In heart disease when disturbances of compensation occur prior to marriage.

B. Temporary: (1) In Bright's disease and diabetes so long as disease exists. (2) In heart disease developed after one or several pregnancies. (3) In prolapsus of the uterus until cured. (4) During one to one and a half years after each confinement.

REVIEW OF MEDICAL AND SURGICAL PROGRESS

INTERNAL MEDICINE GENERALLY.

UNDER THE CHARGE OF

WILLIAM EWART, M. D. (Cantab.), F. R. C. P. (Lond.),

Senior Physician to, and Joint Lecturer on Medicine at St. George's Hospital; Physician to the Belgrave Hospital for Children,

FRANK BILLINGS, M. S., M. D.,

Professor of Medicine, Rush Medical College, Chicago; Attending Physician, Cook County Hospital and St. Luke's Hospital; Consulting Physician to Charity Hospital, etc.,

AND

WILLIAM E. HUGHES, M. D.,

Professor of Clinical Medicine, Medico-Chirurgical College; Visiting Physician to the Philadelphia Hospital; President of the Pathological Society; Pathologist to the Presbyterian Hospital, etc.,

AND

GEORGE W. PFROM, M. D.,

Lecturer on Materia Medica and Therapeutics, Medico-Chirurgical College; Assistant Visiting Physician and Chief of Medical Dispensary, Medico-Chirurgical Hospital, etc.

Formalin as a Test for Bile Pigment. Professor Browiez (*Allg. Wiener Med. Zeit.*, 1898) having noticed that when the liver was hardened in formalin the bile was not only preserved in the ducts but also showed certain color reactions (yellow and green), called the attention of Professor Gluzinski to this fact, whose researches in this line have resulted in his giving the following as a test for bile pigment in the urine: Take three test-tubes, place 3 c. c. of suspected urine in No. 1, also 3 c. c. in No. 2; to the No. 2 add 1 c. c. formalin and boil for a few minutes when a greenish color results, the intensity of the color depending upon the quantity of bile pigment present. This color is better shown by contrast with urine in tube No. 1. One-half of the contents of No. 2 is poured into tube No. 3, to which is added a few drops of concentrated HCl, giving at once an amethyst-violet color.

Some Experiments in Uric Acid—Urea. Pearce (*Jour. Am. Med. Ass.*, Nov., 1898) records some interesting experiments on the relations of uric acid and urea to internal metabolism especially as to the determination of uric acid on a milk diet. For this purpose 2 cases of Weir Mitchell's were selected, one, a hysterical woman of 40 who was taking the rest-cure, the other, a man suffering from recurrent melancholia. In the first case, at the end of the week of milk diet the urea had fallen to 1.4 per cent. while the uric acid decreased to .04 per cent., the amount of urine varying to the extent of 20–30 cm. The specific gravity and the pigment were also considerably reduced. At the end of another week the urea had lessened to 1.3 per cent. and uric acid to .03 per cent. By the eighteenth day the lowest point was reached: Urea 1.2 per cent., uric acid .019 per cent. Then eggs were added. The uric acid continued to diminish while the urea promptly increased to 1.4 per cent. When meat diet was given on the twenty-second day the urea which had then risen to 2 per cent. receded to 1.6 per cent. while the excretion of uric acid began to increase to .03 per cent., .034 per cent., reaching as high as 4 per cent. (urea 2 per cent.) on the twenty-fifth day. On the twenty-sixth day the

uric acid reached the normal standard (.046 per cent.) while the urea lacked 8 per cent. of normal. This leads the author to the conclusion that while the excretion of both urea and uric acid tends to lessen when proteids are cut off or suboxidation of the tissues takes place, yet the ratio of urea and uric acid is not held in a fixed proportion. If one is more, the other is apt to be less. The appended table also establishes the fact that the uric acid is reduced to a minimum on a milk diet. Traces of indican were detected only after solid food was largely added. A. R.

Bromide of Strontium in Epilepsy. Antony Roche (*Lancet*, Oct. 15, 1898), since his initial notes, has not met with any case where this remedy has failed to cure or reduce the number of attacks. Some of his cases have been apparently absolutely cured. The continued use of this bromide has not been followed by any bad results, contrary to his experience with other bromides. At first he used it in combination with others, but he has become convinced that its use alone is most beneficial. To control the paroxysms it must be given in full doses—from 1 to 3 drachms daily—and where there has been failure it has been apparently due to the too small dose. It may be given, and this he urges, for long periods. In addition he regards the diet of much importance, restricting his patients to fish and vegetables.

Treatment of Pneumonia Based on the Condition of the Vasomotors. R. Van Santvoord (*N. Y. Med. Jour.*, Oct. 8, 1898), reviewing the literature of experiments upon animals and referring to his own personal experience, finds that the cause of the heart failure in pneumonia is not in an intrinsic condition of the heart muscle, but in the vasomotor dilatation of the peripheral vessels produced by the toxin. The increased strain upon the right heart is, at least in part, due to the greater amount of work thrown upon the organ as a whole by the necessity of maintaining the equilibrium of the circulation which is threatened by the paralysis of the vasomotors. The most obvious method of combating extreme dilatation of the peripheral vessels is to administer drugs which cause their contraction. With this object in view he employed chloride of barium in doses of four grains every four hours, with a good result in only one case. Fluid extract of ergot, half a drachm every three hours, benefited a few cases. Strychnine causes contraction of the peripheral vessels. The remedy which best meets the requirements is digitalis, which must be used in large doses. Although nitroglycerine is generally contraindicated, yet in a few cases it may relieve the embarrassed right heart by still further increasing the peripheral dilatation, thus lessening the amount of blood to be forced through the lungs, an action analagous to bleeding.

Diphtheria in London. F. A. Dixey (*Med. Press*, Oct. 12, 1898), reviewing the statistics for the past two years, finds that the amount of diphtheria is still high, but is diminishing. The seasonal relations are the same as heretofore. The interruption to the usual course of mortality coincident with the two chief school holiday periods is again apparent. The new evidence, like the old, tends to show that school-infection is an important factor in the spread of diphtheria. The decreased mortality coincident with the employment of antitoxin has continued.

Diphtheria Antitoxin in Whooping-cough. Cerioli-Pavia (*Klin.-therap. Woch'schrift*, 1898), during a severe epidemic of whooping-

cough, used the antitoxin for diphtheria and obtained much more satisfactory results than from any medicinal agents resorted to. The cases selected, 15 in number, were of severe type with complications and all made good recoveries—the duration of each case being much shortened. In one case, 4 hours after first injection, the symptoms showed marked improvement, in the others 10 hours to 3 days gave a like result. The antitoxin not only ameliorated the disease itself, but also the complications, especially of the bronchi and lungs. The dose given was 5–10 c. c., repeating the same according to the rapidity of its action, but generally one injection sufficed. The literature on the subject shows that when both diphtheria and whooping-cough were present in the same patient, the serum gave relief to both conditions. Though as yet the mode of its action is unknown, it appears that there may be some analogy in the exciting causes of the two diseases.

Bourget (*Correspondenzblatt für Schweitzer Aerzte*, No. 17, 1898) describes a test-paper for the detection of iodides in the saliva and urine. An ordinary filter paper of any convenient size, say eight by twelve inches, is immersed in a five per cent. solution of boiled starch and allowed to dry. The surface of the paper is then divided into squares, two and one-half by two and one-half, and two or three drops of a five-per-cent. solution of persulphate of ammonia applied to each square, after which the paper is again put away to dry in a dark place. If any liquid containing traces of iodine comes in contact with such a paper, a blue color is produced. On the first square the time of the taking of the iodide capsule is marked, and on the remaining squares the hours at which the patient is to "record" his saliva. Thus the physician need not personally superintend the test, which extends over 24 hours, but merely takes the readings at his next visit. As the test-paper begins to lose its virtue after two or three weeks, it is found more convenient to give the patient simply a starched paper, marked off in squares as described, and to add the sulphate of ammonia after the saliva has been deposited. Delicacy of the test, 0.00005. A. R.

DISEASES OF THE CHEST.

UNDER THE CHARGE OF

A. E. SANSOM, M. D., F. R. C. P.,

Physician and Lecturer on Clinical Medicine in the London Hospital; Consulting Physician, N. E. Hospital for Children; Physician, Royal Albert Orphan Asylum; Physician, Royal Hospital for Diseases of Chest, etc.,

AND

JOHN H. MUSSER, M. D.,

Assistant Professor of Clinical Medicine, University of Penna.; Physician to the Philadelphia and Presbyterian Hospitals, etc.,

ASSISTED BY

J. DUTTON STEELE, M. D.,

Assistant Demonstrator Morbid Anatomy, University of Penna.

Hemorrhagic Pleuritis in Children. Lewin (*Jahrbuch für Kinderheilkunde*, Band XLVII., 1898, No. XVI.) found 50 cases of pleurisy with effusion in 10,416 cases treated in the children's polyclinic in Berlin. In 4 cases the exudate was hemorrhagic. Reimer in 121 autopsies in cases of children with pleural exudate found five to be hemorrhagic.

Israel found the condition only twice in 206 autopsies in children with exudative pleurisy. Lewin in his cases excluded tuberculosis, syphilis, sarcoma, cancer, hemorrhagic diathesis, heart disease, acute infectious disease, and nephritis. The cases were between the ages of twelve months and five years, 1 girl and 3 boys. In one the outcome is unknown, the other three recovered. When the above-mentioned causes are excluded this form of pleural exudate seems very rare. The diagnosis cannot be made with certainty between this form and other pleural effusions except by the use of the exploring needle. Gerhardt mentioned pallor of the skin as a symptom peculiar to the hemorrhagic form and one case presented this phenomenon. The prognosis as a rule is favorable. No cause can be assigned for the presence of the blood in the case reported.

Contribution to the Pathological Anatomy of the Morbus Basedowii Especially with Regard to the Affection of the Muscular System. Askanazy (*Deutsches Archiv für klin. Med.*, B. 61, p. 118) reports the results of the examination of the entire voluntary muscular system in 4 cases of this disease, and in each found a widespread degeneration of the muscle, causing a replacement of the fibers by fatty tissue. Many of the characteristic symptoms of the disease can be explained by this discovery, especially the tremor, exophthalmos (from weakness of the muscles of the orbit) incoördination of the eyeball, and muscular weakness. The heart muscle does not appear to be included in the process, but attention is called to the presence in the hearts of such cases, of excess of connective tissue due to a proliferation subsequent to degenerative process. In none of the cases was the nervous system at all affected although carefully examined. The changes in the thyroid were those usually found in the disease; proliferation of the epithelium of the follicles, absence of the colloid material and failure of differentiation of the cell masses. Askanazy considers this observation to be the first of the kind recorded.

DISEASES OF THE DIGESTIVE SYSTEM.

UNDER THE CHARGE OF
SIDNEY MARTIN, M.D. (Lond.),
Professor of Pathology in University College; Physician to University College Hospital; Assistant Physician to Hospital for Consumption, Brompton, England, etc.,
AND
BOARDMAN REED, M.D.,
Philadelphia,
ASSISTED BY
LA BARRE J. LEAMY, M.D.,
Clinical Assistant in Department of Medicine, Philadelphia Polyclinic.

A Case of Splanchnoptosis and Achylia Gastrica. At a recent clinical meeting of the Medical Board of the Massachusetts General Hospital, Dr. Putnam presented a man the upper border of whose stomach when distended with air was 2 to 3 finger-breadths above the umbilicus in the horizontal, and at the umbilicus when in the upright, position. The lower border reached the pubes. The kidneys could be palpated, the right showing a considerable displacement downward. Other organs were normal. Repeated examinations of the stomach contents showed a complete absence of HCl. There was no gastric digestion. Putnam considers this combina-

tion of conditions infrequent in men, and an expression of neurasthenia or neuropathy. He construes the symptoms as pointing merely to achylia gastrica, and not to complete atrophy. [Displacements of the abdominal organs though relatively less frequent in men than in women, yet occur often enough even in the male sex and should always be looked for in obscure cases of ill health. Such persistent and complete absence of secretion means usually atrophy of the glands and not a neurosis merely. B. R.]

Conservative Treatment of Intestinal Occlusion by Internal Electricity. Johnson (*Jour. Am. Med. Ass.*, Oct., 1898) quotes some European authorities in support of the statement that in obscure cases of intestinal obstruction where the indications for operation are not sufficiently clear, electricity applied through water in the form of an enema will save many a life. The galvanic current of moderate intensity should be used. A 1 or 2 per cent. solution of salt is more efficient than warm water alone. As yet this method has been in use principally in Europe. [Dr. Margaret Cleaves, of New York, to whom the writer does not refer, has advocated enthusiastically the use of electricity conveyed into the bowel by means of water. B. R.]

Tetany and Tetanoid Spasms Associated with Gastric Dilatation Treated Surgically. Robson (*Lancet*, Nov., 1898) believes that tetany is frequently associated with gastric dilatation; he does not, however, concur in the opinion held by Trevelyan that it is a symptom of extreme gravity, the majority of cases terminating fatally. He thinks an operation on the stomach will cure many cases otherwise fatal. He has operated on 30 cases, several of the patients suffering from quite severe attacks of tetany. Of the four cases the author reports as an illustration one had an attack which simulated strychnine poisoning. In all these cases stenosis of the pylorus accompanied by dilatation of the stomach was found, and an operation was followed by a complete cure of the spasms. Curiously, he has never seen this symptom in other than dilatation due to simple causes, such as adhesions to the pylorus, gall bladder or liver, or in stricture of the pylorus due to cicatrization of ulcers; but when the dilatation was unobstructive, tetany was not observed. As to the cause, the author came to the conclusion that it is due: 1st to the absorption of some poison from the dilated stomach which increases the excitability of the nervous system and 2d to a reflex effect produced by the painful contraction of the pylorus.

Intestinal Obstruction from Gall Stones, With Report of a Case. Lord (*Jour. of Am. Med. Ass.*, Oct., 1898) reports the case of a man, aged 70 years, who was suffering from vague gastro-intestinal symptoms for about one year, when suddenly he was attacked, while at breakfast, with acute pain in the left side, midway between the umbilicus and the spine of the ileum. This was soon followed by evacuation of the bowels and vomiting which became stercoraceous on the following day. Temperature was 101 and pulse 120. Tympanitis moderate. Little pain on palpation. A tumor-like mass could be recognized below and internal to the sigmoid. A probable diagnosis of volvulus having been made, an operation was performed, which revealed an impacted gall stone $4\frac{1}{2}$ by 6 inches in circumference and $2\frac{1}{16}$ inches in length. A partial analysis showed it to be composed largely of biliary sediment and fat. The author thinks that gall stones may exist for years without their presence being known. Obstruc-

tion usually takes place by mechanical occlusion. The stones of less size than the caliber of intestines may also, in some cases, bring about an obstruction by early stimulation and contraction of the circular muscular fibers. The possibilities of spontaneous evacuation of the stone is possible in from 30 to 50 per cent. of the cases. The remaining 50 to 80 per cent. will die if not relieved by operation. The mortality from the operation is also very high, but he believes that if all cases were operated upon within the first 24 hours the mortality would be reduced. Fecal vomiting should be the signal for operative interference in any form of obstruction when other means fail. He finds lavage of very great value even in cases surgically treated. When employed before the operation it prevents vomiting.

Gastric Surgery in Carcinoma and Simple Ulcer. Kocher (*Correspond.-bl. für Schw. Aerzte.*, Vol. XXV., 1898), in an elaborate paper on this important subject, places himself as an advocate of early operative intervention. He believes that we must not wait until a swelling appears. We must decide on an operation when the case is that of an adult or elderly person suffering from protracted stomach trouble and presenting symptoms which point to ulcer or stenosis. An exploratory incision, even should it remain such, is entirely harmless under proper asepsis. Obstinate progressive stomach trouble in old people, who do not suffer from ulcer, stenosis and similar affections, is of much rarer occurrence than many physicians think, excepting, of course, the "sympathetic" stomach affections in gall stones, floating kidney, genito-urinary or other diseases. The only disease which may mislead in the diagnosis of carcinoma is simple ulcer, but in this affection the chemism of the stomach is different inasmuch as it shows hyperchlorhydria. Yet even in this case an operation is indicated in a great number of instances. When successive and profuse hemorrhages occur, or when internal treatment fails to effect a cure, an operation is the only means of saving the life of the patient. It cannot be too strongly emphasized how important operative intervention is in *repeated* hemorrhages, even though slight. We need not wait until the patient is almost exsanguinated and at the last moment operate; it is wiser to resort to an early gastroenterostomy, excision of the ulcer, or finally a circular resection of the stomach. In all instances the indications for operation are that much more urgent when the least suspicion of carcinoma exists. When, in old people, symptoms of ulcer appear; when medication fails to bring about the desired results after a lapse of a certain time; when pain, vomiting and especially repeated bleeding point to great obstinacy of the affection, then an operation is absolutely necessary, before exhaustion or perforation take place. The author, as well as Mikulicz, has observed that in cases where a laparotomy reveals the absence of suspected grave conditions, in the neuroses, the affection permanently disappears after the operation. Under all circumstances, when we are in doubt, an operation is the only sure means of preventing further complications. He points out a number of cases of carcinoma in his own practice, and those observed by others, that were permanently cured by an early operation.

The Action of the Gastric Juice on the Bacillus of Tuberculosis. Sabrazès, Bordeaux (*Med. Press and Circular*, 1898), thinks the bacillus of tuberculosis is not appreciably modified by the action of the gastric

juice, either in the form or staining reactions. He points out that the greater part of the elements which constitute the bacterial cell are not susceptible of digestion by the gastric juice, towards which the cells act in the same manner as cellulose and nuclein. This latter body indeed would appear to enter largely into the composition of the bacteria. Moreover, the bacillus did not lose its vitality or its virulence until after thirty-six hours' contact with the gastric juice. It would then be injected subcutaneously in guinea pigs without producing any local lesion, but after each injection the animal lost weight to a marked extent, though this was promptly recovered from. The susceptibility of the guinea pigs was not diminished by these injections; indeed, it appeared to be enhanced thereby. These researches emphasize the necessity for the sterilization of articles of food, seeing that the bacillus is not amenable to the solvent action of the gastric juice.

Further Observations on a Case of Total Extirpation of the Stomach in the Human Subject. Schlatter (*Lancet*, Nov., 1898) communicates his further observations on his case of complete removal of the stomach. The patient's weight has increased 18½ lbs. since the operation. Her general condition is excellent, and she is able to partake of ordinary diet without any inconvenience other than a feeling of pressure in the epigastrium and in both hypochondriac regions after a hearty meal. A quantity of milk amounting to 10½ fl. oz. is quite capable of producing this feeling of pressure. Her digestive capacity can be judged from the following diet lists: Jan. 17th: milk, 33 fl. oz.; coffee, 13 fl. oz.; 3 rolls; 3 eggs; soups, 3½ fl. oz.; fried sausage, 4 oz.; stewed apples, 7 oz.; whortleberries, 3 oz., and claret, 7 fl. oz. Feb. 5th: milk, 11½ fl. oz.; 3 rolls; 3 eggs; soup, 4 fl. oz.; sweetbreads, 10½ fl. oz.; cauliflower, 7 oz., and claret, 7 fl. oz. March 4th: milk, 10½ fl. oz.; coffee, 7 fl. oz.; soup, 4 fl. oz.; roast veal, 4 fl. oz.; carrots, 14 fl. oz.; 4 rolls, and claret, 7 fl. oz. Her animal food varied between roast veal, Vienna steak, chops or cutlets, beefsteak, fried sausage, brain, sweetbread and fowl. Analyses of urine and feces showed a diminution of chlorides and nitrogen indicating an abundant absorption of albumen. Microscopical examination of the feces revealed an entirely normal condition. There were no putrefactive changes present, proving that the entire absence of the gastric juice, with its HCl, is without any influence on the extent to which putrefactive decomposition is developed in the intestine.

The Oppler-Boas Bacillus in the Diagnosis of Gastric Carcinoma. Knickerbocker (*Phil. Med. Jour.*, Nov., 1898) considers the presence or absence of the Oppler-Boas bacillus as of great diagnostic significance in carcinoma of the stomach. The bacillus is, as a rule, found in a medium containing lactic acid and is not associated with sarcinæ. These usually disappear and are replaced by the Oppler-Boas bacilli whenever the medium becomes favorable for the latter. Of the four cases reported by the author one presented sarcinæ and HCl but no Oppler-Boas bacilli; two others in which lactic acid was present showed the bacilli but no sarcinæ. From a study of his own and other cases reported by Boas and others the author comes to the following conclusions: (1) That, while not pathognomonic of carcinoma, the presence of the Oppler-Boas bacilli is of the utmost diagnostic value. (2) That their presence may be demonstrated in

nearly all cases at some stage of the disease. (3) That in a large number of cases the bacilli may be found before the tumor has involved surrounding structure to such an extent as to make extirpation impracticable. (4) That in a limited number of cases the bacilli may be found before palpable evidence of tumor. A. R.

Neuritis from the Ingestion of Putrefying Pork. Spiller (*Phil. Polyclinic*, No. 39, 1898) reports a case of peripheral neuritis produced by the bacillus botulinus, an anaërobic, motile microbe found in putrefying ham. The patient, a man 62 years old, after partaking of some pork, was attacked by acute gastroenteritis, which was from the beginning accompanied by pronounced symptoms of neuritis, the latter persisting long after the gastroenteritis was cured. Two other men who had eaten the same pork at the same time suffered only from gastroenteritis. A. R.

Cancer of the Stomach. In a discussion of this subject at the San Francisco County Medical Society (*Pac. Med. Jour.*, Oct., 1898) several interesting points were brought out. Cheney, as a result of an examination of 150 cases found 20 of cancer of the stomach in subjects under 30 years (between 20 and 30), and 17 between the ages of 30 and 40, thus proving that the disease is not at all rare under 30. Of these 150 cases only 11 gave a family history of cancer. In no instance was injury discovered as an etiologic factor. Among the most prominent symptoms complained of pain was present in 130 ; vomiting in 128 ; while a tumor could be made out in 115 cases. Only 36 patients vomited blood. An aggravated form of dyspepsia was found in 38 patients. He further pointed out the fact that a tumor of the pylorus may be found in almost any part of the abdomen. Inflation of the stomach, either by means of bicarbonate of soda and tartaric acid or by gas, should always be resorted to. It is a perfectly safe procedure. The chemic examination of the contents of the stomach by itself is not conclusive. Rixford presented the stomach of a woman fifty-five years old on whom anterior gastro-enterostomy had been performed for cancer of the stomach. For two days after the operation she did well. On the third day there appeared symptoms of perforation and the patient died on the following day. The autopsy revealed an old ulcer on the posterior wall of the stomach, which perforated, probably as a result of the vomiting and the tugging during the operation. Carpenter favored introducing the electric light into the stomach for the diagnosis of dilatation. D. Tait blames the physician for sending to the surgeon the patients with cancer when they are almost on the brink of the grave. Considering the tumor from a pathological standpoint he concludes that, where the epithelial cells predominate we may expect early ulceration and glandular involvement. When, on the contrary, the stroma is in excess, we get extensive infiltration and symptoms of obstruction.

Study of the Motor Function of the Stomach by the Air of the Roentgen Rays. Roux and Balthazer (*La Presse Med. Belge*, No. 47, 1898) report the results of numerous experiments upon frogs as well as upon dogs and men. Liquids taken into the stomach began to be evacuated at the end of 2 or 3 minutes in dogs and men. Solids remained much longer, not passing out till some hours after ingestion—about 3 hours. Pure water emptied itself by the end of 5 to 10 minutes, but when to 50 c. c. of

water 5 to 10 grams of peptone were added, an abundant secretion was determined which persisted for 1 to 1½ hours until the mass was wholly liquefied, when it passed out. A 3% solution of HCl caused about the same phenomena, but a little more slowly, perhaps, according to the authors, favoring the production of peptones.

NEUROLOGY.

UNDER THE CHARGE OF

WILLIAM G. SPILLER, M.D.,

Professor of Diseases of the Nervous System in the Philadelphia Polyclinic; Associate in the William Pepper Clinical Laboratory, University of Pennsylvania, etc.,

AND

J. WILLIAM McCONNELL, M.D.,

Associate in Neurology in the Philadelphia Polyclinic.

A Study of the Lesions in a Case of Trauma of the Cervical Region of the Spinal Cord Simulating Syringomyelia. James Hendrie Lloyd (*Brain*, Spring, 1898) some time ago reported two cases which presented the clinical picture of syringomyelia, and were especially interesting, inasmuch as trauma was the cause of the symptoms. The microscopical report of one of these cases is now given, and it shows that other conditions than cavity formation may produce a symptom-complex resembling that of syringomyelia. The patient presented the Brown-Séquard form of paralysis, *i. e.*, he had paralysis of motion on one side of the body and dissociated paralysis of sensation on the other. The cause was fracture of the cervical vertebræ with compression of the cord at the level of the fifth, sixth and seventh cervical roots. The left antero-lateral column, the left anterior and posterior horns, and the anterior portion of the posterior columns were much degenerated at the seventh cervical segment, but the right side of the cord was nearly, though not entirely, intact. The ascending degeneration was confined to the left direct cerebellar and Gowers' tracts, and the anterior part of the posterior columns. The left crossed pyramidal tract was partially degenerated upward through one or two segments. The descending degeneration was in the left crossed pyramidal and Schultze's comma zones. No cavity was found in the cord. The inferences which the author draws from these findings are of much interest. The tactile anesthesia, observed in the right foot and leg as high as the knee, was explained as a hysterical phenomenon, because it was segmental and because the columns of Goll were not seriously involved. The preservation of tactile sense elsewhere is explained by the fact that the posterior columns were not seriously affected except in their anterior part, where the fibers are endogenous [?]. The disturbance of pain and temperature senses on the right side of the body is attributed to the involvement of Gowers' column on the left side of the cord. [The comparison of clinical phenomena with pathological findings has done much to increase our knowledge of the physiology of the nervous system. The case reported by Lloyd is one of considerable value. It must be remembered, however, that often organic changes do not explain sensory phenomena as satisfactorily as they do motor. Segmental anesthesia is common in syringomyelia, and its boundaries may vary from time to time. Dejerine and Spiller proved that the fibers in the anterior part of the posterior col-

umns of the lower thoracic region are not entirely endogenous, and Russell and Schaffer have recently confirmed their findings. The fibers in the ventral field of the cervical region may, likewise, be partly exogenous. Lloyd's valuable findings do not explain why, in his patient, pain sense was more involved than temperature sense, and they permit the conclusion that the fibers for these two senses are contained in the antero-lateral column, but not necessarily in Gowers' tract. Müller has recently shown that tactile sense is usually preserved in the Brown-Séquard form of paralysis, and Lloyd's case in this respect is not unlike many others.]

Hysteria in a Man Presenting the Symptoms of Chronic Intestinal Stenosis. Laparotomy Performed Twice. Dr. Strauss (*Berl. klin. Woch'schrift*, No. 38, '98) reports the following very interesting case: Man 29 years old; shoemaker, well until his fourteenth year, when he had typhoid fever followed by relapse. Later, when in the cavalry, he was injured by his horse falling on him, and sustained a fracture of the rib on the left side, from which he recovered completely. While in the hospital he suffered from obstinate constipation which could not be relieved by the strongest medication. The constipation was often accompanied by stercoraceous vomiting and polyuria. He sought relief in various hospitals and a diagnosis of stenosis of the intestines and diabetes insipidus was made. At that time he presented the following symptoms: severe vomiting, constipation, tympanites and severe pains in the left hypogastric region. Laparotomy was performed, but no pathological conditions were found. The patient, however, improved after the operation, his constipation being considerably relieved. One year later the patient came again to the hospital, for the relief of the former symptoms. Again a diagnosis of stenosis was made, and a second laparotomy performed. A long, thin, white, elastic band was found on the inner part of the mesentery. This band was excised. On the fifth day after the operation the bowels moved, and the patient felt much better. Shortly afterwards he again became a frequenter of various hospitals, suffering from constipation which often lasted for fourteen days. He was finally discharged without any improvement in his condition. While walking on the streets of Berlin he suddenly fell, and was brought to the hospital. The symptoms he presented indicated a serious lesion. Facies hippocratica was present to a great extent; the abdomen was enormously distended, rigid and very tender, the pain was excruciating, and could only be relieved by large doses of morphine. Severe and prolonged vomiting, hiccough, constipation, absence of flatus gave an almost completed picture of intestinal obstruction. Temperature and pulse, however, were normal. The urine was of low specific gravity, varying in amount from 2,500 to 4,800 c. c. in twenty-four hours, otherwise normal. On several occasions patient suffered from retention. He was getting worse, when suddenly he had a hysteric attack, and all the symptoms disappeared at once. His condition changed entirely, and even the obstinate constipation could easily be relieved by laxatives. He was finally discharged, cured.

A. R.

Ein Fall von acuter Arseniklähmung (a Case of Acute Arsenical Poisoning). Facklam (*Archiv für Psychiatrie*, Vol. 31, Nos. 1 and 2) reports a case of arsenical neuritis in a girl of 16, which resulted from a single dose of the poison taken with suicidal intent. The paralysis in the lower

limbs was greater below the knees, and in the upper greater below the elbows; it was also especially noticeable in the extensors. Reaction of degeneration was present in the distribution of the nerves most affected. Pigmentation of the skin, ataxia, absence of the patellar reflex, disturbance of sensation, early and rapidly developing muscular atrophy, were prominent features of the disease. Tachycardia was an interesting symptom. Complete recovery occurred without recurrence in a colder season of the year.

MEDICAL DISEASES OF THE KIDNEYS.

UNDER THE CHARGE OF
PROF. DR. CARL VON NOORDEN,
Of Frankfort, Germany,
AND
JAMES TYSON, M. D.,
Clinical Professor of Medicine, University of Pennsylvania, etc.,
ASSISTED BY
A. ROBIN, M. D.

Movable Kidney in Children. Comby (*Pediatrics*, Nov., 1898) has observed a number of cases of this condition in children. Out of the 18 cases, 2 were 1 and 3 months respectively; 6 between 1 and 10 years; 10 above 10 years of age. Sixteen were girls and 2 boys. In 14 of the cases the mobility was associated with dyspepsia and dilatation of the stomach; 2 suffered from hereditary syphilis; chlorosis was found in 2; lienteric diarrhea in 1; migraine in 1; and psoriasis in 1. In nearly every case the affection was latent, and some cases were mistaken for chronic appendicitis. The author believes that in some cases the affection is congenital. The symptoms are often obscure and generally like those in the adult, although diagnosis is more difficult. Among the conditions with which it may be confused are: coprostasis, appendicitis, different cystic or solid tumors of the kidney, perinephritis, stone, etc. The treatment is the same as in adults.

What are the Symptoms of Nephritis? Edes (*Jour. Am. Med. Ass.*, Nov., 1898) ascribes a great deal of the confusion existing with reference to the pathologic significance of albuminuria to a faulty nomenclature. He objects to calling Bright's disease any other condition but the one actually described by Dr. Bright. Transient, physiologic or cyclic albuminuria is quite common. In the majority of cases it is provoked by exposure, which often tends to raise the arterial tension and thus bring more pressure to bear on the kidneys. Excessive exercise and vaccination also enter into the etiology of this disturbance. The more frequent occurrence of transient albuminuria, with only traces of albumen, is due to the more delicate reagents used. Thus, with "Tanret" (iodohydrargyrate of potassium), it is said to be detected in the majority of cases of healthy persons; rising to 90 per cent. in soldiers returning from a review, and 100 among cuirassiers just vaccinated and infantry after a cold bath. The author concludes from this that these delicate tests are absolutely of no value since they do not draw a line between danger and safety. With re-

gard to casts, a small number of them does not greatly add to the gravity afforded by small quantities of albumen. The so-called "mucous" casts are of no significance. The large casts, which are pathognomonic of grave renal changes, usually occur when their diagnostic significance is made almost useless by other symptoms. The author also expresses a belief that the origin of many cases of interstitial nephritis in young persons, where no other sufficient cause can be found, might be due to some difficulty of micturition.

Hemorrhages from Anatomically Unaltered Kidneys. S. Grosglik (*Sammlung klin. Vort. von Volkmann*, No. 203) says that renal hemorrhage is mostly of a symptomatic nature depending on an inflammation of the organ, or renal calculus, renal tuberculosis and renal tumors. However, a number of cases have been observed in which the most careful examination excluded any of the above-mentioned pathologic conditions, and, except simple hemorrhage, no anatomic changes were found. In these cases we must speak of an *essential renal hematuria.* The cases so far observed agree as to the fact that there is more or less of a hemorrhage from a kidney, the integrity of which could be well established either by operation or other means of clinical diagnosis. In single instances the hematuria was a local manifestation of a general dyscrasia-hemophilia. In others, again, it was observed that the hemorrhages resulted from excessive bodily exercise (horseback-riding, cycling, etc.) which produced a hyperemia of the renal blood vessels and consequent slight rupture of the smaller ones. But there remain many cases in which neither the one nor the other etiologic factor could serve as an explanation. Léguen in 1891 described a morbid condition of the kidneys which he called "néuralgies rénales," colic-like pains, often accompanied by hematuria, occurring in the kidneys of nervous, hysteric individuals, not dependent on any organic renal lesion. This symptom Léguen explains by the hyperemia induced by the neuralgia. Later, Broca associated these hemorrhages not accompanied by pain with disturbance of the vasomotor nerves, and here comes into consideration mainly a fault in the vasomotor centers, which leads to a weakening of the vessel walls and overfilling of the small blood vessels resulting in a "vasomotor hematuria."

DERMATOLOGY.

UNDER THE CHARGE OF
P. G. UNNA, M. D.,
Of Hamburg, Germany,
AND
ARTHUR VAN HARLINGEN, M. D.,
Emeritus Professor, Diseases of the Skin, Philadelphia Polyclinic; Consulting Dermatologist to the Children's Hospital, etc.

A Case of a Rare Skin Disease, Acanthosis Nigricans. Barski (*Vratch*, Nos. 33, 35 and 37, 1898) reports a case of a boy 13 years old, in whom this disease developed at the age of 2, spreading very extensively. The symptoms are: Extreme pigmentation of the skin, hypertrophy of the papillæ, changes in the mucous membranes, nails and hair. Usually some disturbance of the general nutrition is also present. The pigmentation is always found on the neck, around the anus, external genitalia, also in the

axillæ, navel, hands, elbows and breast. The affection is symmetrical. The hypertrophy of the skin-papillæ is either slight and diffused or very marked and localized, often reaching the formation of tumors. This hypertrophy affects also the mucous membrane of the nose, lips, gums, cheeks and especially the tongue. The hair becomes dry and brittle, falling out easily; the nails become thick and brittle. Cachexia soon develops, accompanied by severe pains all over the body, especially the stomach. In some cases a carcinomatous growth can be discovered in the abdominal cavity.

A. R.

Hydroa Vacciniforme. White (*Jour. Cutan. and Gen.-Urin. Dis.*, Vol. XVI., 1898) reports some exceptional cases of this skin affection, the generally accepted description of which is as follows: It begins between the first and third years of life, almost exclusively in boys; the attacks occur in spring and summer after exposure to the sun; the lesions consist of small and large vesicles, which coalesce to form large bullæ, and are seated upon the face, ears, wrists and hands; they are often depressed in the center, like those of vaccinia, and present a dark sunken base from hemorrhage or necrosis; crusts succeed, followed by scars resembling those of smallpox. In the interesting cases observed by the author the striking features were the cessation of all activity in the process during the warm months for 10 consecutive years in a girl, the all-the-year-round outbreaks in a boy, the failure to be especially influenced by exposure to sun or weather, the extensive distribution of the cutaneous changes, the disease affecting large portions of the legs and arms beyond its usual seats, the large size and long duration of the individual lesions, the magnitude of the subsequent cicatrices, and the great disfigurement observed from time to time. The author concludes that his cases belong to an exaggerated and exceptional type of this affection.

A Report of 3 Cases of Urticaria Pigmentosa. Stelwagon (*Jour. of Cutan. and Gen.-Urin. Dis.*, Dec., 1898) reports 3 cases of this affection, which is comparatively rare, since these were the only cases observed in an experience of 20 years. The following points were especially noticed: The beginning lesions were, for the most part at least, wholly urticarial in their earliest stages; many behaved as such and disappeared, in others there seemed to be some mild hemorrhagic deposit with a tendency to more or less permanent cell infiltration. The eruption was most abundant on the neck and trunk. The disease began in very early life, 1 patient being 18 months old, in the other 2 in the first 6 months. Two of the cases were in females. The author believes that the disease is in the beginning essentially an urticaria, and the subsequent peculiarities are due to some secondary changes in the lesions.

Tuberculosis and Cooking. Dr. Woodhead in his testimony before the Royal Commission on Tuberculosis stated that while a temperature of 160° to 175° F. will kill the bacilli of tubercle it does not injure their spores, and that the latter will even resist a temperature of 212° F. for 15 min. It will thus be seen that cooking affords a minimum of protection from infection.—It has been ascertained by experiment that the temperature in the center of a cooked joint over six pounds seldom reaches 140° F.

PEDIATRICS.

UNDER THE CHARGE OF
W. SOLTAU FENWICK, M.D., B.S. (Lond.), M.R.C.P.,
Physician to Out-Patients at the Evelina Hospital for Sick Children, etc.,
AND
JOHN MADISON TAYLOR, M.D,
Professor of Diseases of Children, Philadelphia Polyclinic, etc.,
ASSISTED BY
JAMES HERBERT McKEE, M.D.,
Instructor in Pediatrics, Philadelphia Polyclinic.

Dermoid Cyst Over the Center of the Large Fontanelle. A. Jacobi (*Arch. of Pediat.*, Oct., 1898) observed a patient who presented this rare tumor. The baby was first seen when 8 months old, and as there was fluctuation over the growth, Jacobi waited for ossification to close the fontanelle. When the patient was 4 years of age, he was operated upon, the tumor removed, and the clinical diagnosis verified. The author states that the diagnosis must be made from encephalocele (rare in this locality) and from meningocele.

An Epidemic of Cerebro-Spinal Meningitis. Wentworth (*Lancet*, Oct. 1, 1898) regards lumbar puncture as one of the most accurate methods of diagnosis in the various forms of meningitis. Great care is needed to be used in the introduction of the needle to obtain accurate information. If fluid is not obtained, the needle may not have entered the spinal canal, or it may have entered and remained outside the dura mater; or, it may be in the subarachnoid space, or it may be occluded by a blood clot or small particle of skin. Again, it may enter the subarachnoid space with its point buried in the dura mater on the opposite side; or the lumen of the needle may be obstructed by pressing against a nerve. To correct these errors he advises that a wire be introduced through the needle of a size to completely fill the lumen and if this is shown to be unobstructed and still the fluid does not flow, the probabilities are that the needle has not penetrated the dura mater and the operation should be repeated, directing the point more toward the median line. It is not sufficient in examining the fluid to depend upon microscopical appearances, but these should be supplemented by bacteriologic studies. An appearance of turbidity is no index to the severity of the symptoms. At times, there seems to be some relationship between the number of organisms found in the spinal fluid and the severity of the disease.

The Exanthem of German Measles. Forcheimer (*Archiv. of Pediatrics*, October, 1898) reviews historically the symptomatology of rubella and comes to the conclusion that much doubt may be thrown upon the significance of the eruption on the skin. He bases his observations upon a widespread epidemic of rubella occurring in Cincinnati, characterized by the presence of all those symptoms considered classic by the authorities, accompanied in his own experience by no mortality; only one case was complicated with nephritis, and to further evidence that the epidemic was one of rubella, he saw seven of the same children subsequently attacked in two or three months by rubeola. The results of his studies are as follows: Because there is practically no period of invasion in rubella the enanthem

appears at the same time as the exanthem. In no case did he see the enanthem where there was not present a suggestion of the exanthem. But epidemics of rubella differ very much in their manifestations. The enanthem is very short lived; it fades away within twenty-four hours, and then come certain results of involution, not present in the majority of cases. It is localized upon the uvula and soft palate and rarely invades the hard palate; he had not seen it extend to any other part of the mouth. It is the same eruption that is found upon the skin, characterized then by its size of efflorescence (that of a large pinhead), its arrangement (streaked and spotted and not crescentic), the absence of great infiltration (very small elevation) and, above all, its color, this being a pure pinky-red, almost exactly the same as the roseola of typhoid fever. During the process of involution there are sometimes left pigmented deposits, usually of a yellowish or yellowish-brown color, either in the form of spots or streaks. The claim that this enanthem is distinctive can be defended by comparison with the enanthem of those two diseases with which rubella is confounded. A glance at these will suffice to establish this proposition. In scarlatina the enanthem appears from twelve to twenty-four hours before the eruption; it appears on the pillars of the fauces in the form of the characteristic puncta, then rapidly spreads over the mouth in the form of a scarlet red coalescing eruption, which finally ends in desquamation, producing the strawberry tongue, and lasting well into the second week of the disease. In measles the enanthem begins upon the soft palate from thirty-six to forty-eight hours before the exanthem, in the form of purplish or bluish papules, arranged crescentically, extends over the cheeks, accompanied by the blue tongue; it is at its maximum with the beginning of the eruption and may take as long as three or four days to disappear.

The Rise, Progress and Present Needs of Pediatrics. Griffith (*Jour. Amer. Med. Ass.*, Vol. XXI., No. 17), in his address as Chairman of the Section on Diseases of Children, at the meeting of the Am. Med. Assn. of Denver, enumerates the more important text-books that have been written on the subject from earliest times, quoting largely from Adams' paper and bringing the list up to date, also the various pediatric journals, showing how admirably the United States is represented in this field of literature. He then takes up the various children's hospitals, beginning with the Dispensary for Sick Children founded in London by G. Armstrong in 1769, and shows how enormous the number now is, how admirably equipped and how wide their scope is becoming. He is not able to learn of a single organization devoted solely to pediatrics in England, though many of the societies have sections devoted to this subject; nor is there in Germany or Austria a single independent society devoted to the study of diseases of children. In fact, there is throughout Europe a great paucity of these special societies. In America there have been several organized attempts in this direction and already there are several independent city societies. In the public teachings of Diseases of Children, Jacobi is the authority that Rosenstein and Roberg introduced clinical instruction in Diseases of Children in Stockholm about 1750. Then, there is none known until 1850, when Giraldes and Bouchut began instructions in this line in Paris; while at about the same time Mauthner was teaching pediatrics in Vienna and Hauner in Munich. This branch now receives attention in nearly all of both the large and small universi-

ties of Europe, and is represented in many of them not by a clinical chair alone, but by a recognized full professorship. In America, progress in this direction has been very slow until recently. The first special chair was established in New York and occupied by Dr. Jacobi. In a careful study which he has made of 117 schools of medicine, there is in more than half of them a special chair for pediatrics; in some of these this subject is combined with some other, but in 7 only is there no announced teaching of diseases of children. Further, of the 64 colleges in which the department has its own independent chair, in 49 the title is that of professor; in only 15 is the title a minor one, as clinical professor or associate professor, showing that in most instances the incumbent enjoys the position of a full member of the faculty. All these facts demonstrate the high estimation in which pediatrics is held in America. All this progress has practically come about within ten years.

THERAPEUTICS.

UNDER THE CHARGE OF
A. D. BLACKADER, M. D.,
Montreal, Canada,
Professor of Pharmacology and Therapeutics, McGill University; Physician to the Montreal General Hospital, etc.,
AND
WILLIAM S. NEWCOMET, M. D.,
Registrar of St. Agnes' Hospital, Philadelphia; Assistant in Medical Dispensary, University Hospital; Chief of Dispensary at Rush Hospital, Philadelphia, etc.

A Contribution to the Treatment of Cocaine Poisoning. Brennan (*N. Y. Med. Jour.*, Nov. 19, 1898) reports a case of severe poisoning from 2 drachms of a 10% solution of cocaine hydrochlorate left in the urethra for 3 minutes, and then milked out; on several previous occasions a 4% solution had been injected without producing anesthesia. Even this strong solution did not seem to lessen the pain, and in fifteen minutes was followed by dysphagia, marked swelling and cyanosis of the face, neck and extremities, dilatation of pupils, inability to breathe unless the tongue was held protruded, respiration spasmodic, loss of articulation and extreme nervousness, but no loss of consciousness. Treatment consisted in the administration of morphine sulphate, hypodermically, in eighth to half-grain doses, enough to control the severe spells of dysphagia, in conjunction with some stimulant, as strychnine, aromatic spirits of ammonia or nitro-glycerine. During the first 24 hours the patient received about 3¼ grs. of morphia, while on the two succeeding days it reached about one grain and followed the next day by the administration of chloral and nitro-glycerine with the manifestation of no further symptoms. He believes that morphia is the physiological antidote of cocaine.

Naftalen. Rosenbaum, of Tiflis (*Therapist*, Vol. VIII., No. 11), read an article before the Imperial Caucasian Medical Society upon the use of this product in rheumatic and gouty pains, epidydymitis, buboes, sprains, eczemas, pityriasis, seborrhea, erysipelas, etc., with good results, and as a base to combine with mercury. It is produced of a peculiar crude naphtha obtained in the Caucasus at the foot of the Armenic Highlands. Its

medicinal value has been known for centuries in Asia Minor. This ointment is of stiff consistency, can be easily smeared, has a dark yellow color, melts about 60–70° C., and leaves no stain upon linen after washing. It does not mix with water or glycerine but easily with fats, and is soluble in ether or chloroform. It does not decompose and is readily absorbed, having this advantage over vaseline. It has also a strong antiseptic action.

Anesthetic Mixtures in General Anesthesia, with Special Reference to the Schleich Mixture. Richard Westbrook (*Brooklyn Med. Jour.*, Nov., 1898) believes that the question of anesthesia is much neglected. All anesthetics are dangerous in the hands of those who know how to use them, and much more so in the hands of those who know little or nothing about them. Many mixtures have been made to lessen the dangers. These have been principally of chloroform and ether alone, or with some other reagent. But one of the oldest is: 1 part of the chloroform to 3 of the ether, known as the "Vienna Mixture," and much used in Germany and Austria, in which the mortality is believed to be about 1–7,600 cases. Chloroform 1, and ether 4, parts is another. In early mixtures alcohol and chloroform were used, either $\frac{1}{3}$, $\frac{1}{4}$ or $\frac{1}{5}$ strength, and this was very efficient for children. All these chloroform mixtures should be given alone. Billroth introduced the chloroform, ether and alcohol in the proportions 3, 1 and 1, which is said to rarely produce vomiting. British surgeons favored the A. C. E. mixture: 1 of alcohol, 2 of chloroform, 3 of ether. The main features of the A. C. E. mixture are that it is easy for the patient to take, and it acts well upon people with rigid chests or neck troubles. For some time Dr. Schleich, of Berlin, has been working with different anesthetics and combining them; he believes that one with a constant boiling point, about that of the body temperature, would be better than those that boil at a higher temperature. Squibb's experiments tend to show that these mixtures are mixtures, and not chemical combinations as is claimed by Willy Meyer. Another advantage of Schleich's mixtures is the rapidity with which the patient goes under and comes out. They are composed of chloroform, ether and petroleum ether (benzene); No. I. having a boiling point of 100.4°, and is intended for short operations. Its combination is benzene 1 pt., chloroform 3 pts., ether 12 pts. No. II. boils at 104°, and consists of 2 pts. less ether than the former. No. III. is made up of benzene 1 pt., chloroform 2 pts., ether 5⅓. The author has collected about 1,400 cases in which these were used (some having praised while others condemned them) and ends by saying "anesthesia always means a step towards death."

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A Case of Argyria. Kraus (*Allg. Weiner Med. Zeit.*, Vol. XLIII., No. 29, 1898) reports a case of a man 63 years of age, who, several decades past, had acquired syphilis and had an irido-choroiditis in later years; otherwise his history was negative. Some years after that he was troubled with a post-nasal catarrh, and through the advice of a friend used an application of a 1 per cent. solution of silver nitrate twice daily, which he continued for ten years. In the last year he had been troubled with more or less muscular rheumatism, loss of weight and strength, giddiness, a numbness and trembling in the legs, with a whitening of the hair; at the same time he also noticed that his scalp, face and lips were turning a peculiar gray, and that, at the time of examination, his face was very dark,

resembling a negro. The mucous membrane of his lips and conjunctiva appeared as in cyanosis. The pharynx was a dark reddish gray. The author dwells upon the points of diagnosis between this pigmentation from silver with, no doubt, some bronzing from syphilis and that of Addison's disease.

Treatment of Cancer of the Ear with Solutions of Arsenic and Alcohol. Trunecek, of Prague (*Therapist*, Nov. 15, 1898, Vol. VIII., No. 11), reports a case of cancer occurring between the ear and mastoid process, involving the ear, and causing induration of the surrounding tissues. The diagnosis was confirmed by microscopical examination. It had caused ulceration of the skin, and over this ulcer he painted twice daily a solution of arsenious acid 1 part; alcohol and water, each 75 parts; having first removed all necrotic tissues. After a month of these daily applications the scabs that had formed began to fall off, and in about six weeks the falling off of these scabs was complete. Applications on the skin over the tumor had no effect. The patient was still under treatment at the time this paper was written.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE CHARGE OF
W. M. L. COPLIN, M.D.,
Professor of Pathology and Bacteriology in the Jefferson Medical College; Director of the Laboratories of the Jefferson Medical College Hospital; Pathologist to the Philadelphia Hospital; Bacteriologist to the Pennsylvania State Board of Health, etc.,
ASSISTED BY
FREDERICK KALTEYER, M.D.,
Philadelphia.

Method of Differential Staining of the Micro-organisms of Human and Avian Tuberculosis, Leprosy and Smegma. Marcinovsky (*Medicinskoe Obosrenie*, Nov., 1898) finds that the ordinary methods of differentiation by means of stains or morphological properties of the bacillus of tuberculosis, bacillus of leprosy and bacillus smegma are inadequate. The bacillus tuberculosis hominis does not differ in its staining properties (as ordinarily employed) from the bacillus tuberculosis gallinarum, except, perhaps, in the more rapid staining and decolorization of the latter. Quite frequently it is necessary to differentiate the b. tuberculosis hominis from the b. of smegma in urine. A necessity for differentiation also arises in cases where leprosy is complicated by tuberculosis of the internal organs. From the staining and morphology of the bacilli of these last affections it is quite difficult to arrive at positive conclusions. The absence of giant cells and caseous degeneration, as well as the presence of a very large number of bacilli, are not always positive signs of lepra, for giant cells as well as caseous degeneration may exist also in the latter. Danielssen even thinks that leprosy may merge into tuberculosis. Some time ago the author, together with Semenovitz, devised a method for staining bacteria which stain with difficulty, such as b. mallei, b. typhi abdominalis, pseudotuberculosis, and gonococci in sections. The method consists in the use of a watery solution of the ordinary carbol-fuchsin (2 parts of water to 1 part of fuchsin) and Löffler's methylene blue. The procedure is as follows: The section is

immersed in carbol-fuchsin for 3–5 min., then thoroughly washed in water and again immersed in the methylene blue for 2–3 min. The bacteria will stain an intense blue. This method the author also employs for differentiating the bacillus of tuberculosis, bacillus of leprosy and bacillus of smegma. After repeated experimentation he got the following results: B. Tuberculosis hominis does not take the stain at all. B. Tuberculosis gallinarum stains readily. To stain these the section is kept in the carbol-fuchsin 6–8 min., in the methylene blue 5 min., the further procedure is as usual (alcohol, oil of bergamot, xylol and balsam). The bacilli are stained red, whereas all other bacteria and the nuclei of the cells are blue. Alcohol does not wash out the red color. Bacillus of leprosy stains readily (carbol-fuchsin, 2–3 min., methylene blue 1½–2 min.). The rods are red and often contain spores. Alcohol decolorizes them very rapidly and still more rapidly are they decolorized by prolonged immersion in the methylene blue (10 min.). Bacillus of smegma also stains red (carbol-fuchsin 4–5 min., methylene blue 2–3 min.). But when the section is kept in the methylene blue for 10–15 min. the bacilli become at first violet and then blue.

A. R.

Varix: Its Causes and Treatment with Especial Reference to Thrombosis. Bennett (*Lancet*, Oct. 15, 1898) believes that for practical purposes varicose veins may be caused in 4 ways: (1) Congenital causes. (*a*) Only the subcutaneous veins involved; *e. g.*, the veins of the calf of the leg. (*b*) Varicose veins with a gross and direct communication with the deep venous trunks. This condition is found about the knee and communicates with the deeper veins in the popliteal space. The congenital cases may not develop until about or after puberty, and the author believes that heredity is a factor. (2) Varices due to obstruction of the blood current by external or internal pressure. As examples of this form he notes the varix from pressure of the gravid uterus in successive pregnancies. (3) Varices due to strain. These cases arise in gymnasts; may result from the violent exercise of football playing, etc. The author cites a case in which the condition was preceded by "a distinct feeling of something having given away." The author believes this to have been a rupture of valves. (4) Cases arising as a result of thrombosis. This thrombosis may follow sprains, injury, inflammation of the veins, etc. Of the dangers incident to varix the author names (1) hemorrhage from bursting of a thin vein, (2) the formation of a thrombus.

Leprosy. Von Düring, of Constantinople (*Deutsche med. Wilhelmsch*, Nos. XX.–XXI., 1898), comes to the conclusion that we should admit: (1) That leprosy is a disease exclusively of man; (2) that it cannot arise spontaneously, and that all cases of leprosy are due to more or less prolonged contact with a leper. He condemns the present tendency toward relaxation of segregation and isolation as preventive measures. He believes that the infectious nature of the disease must be definitely accepted.

A Case of General Infection by the Diplococcus Intracellularis of Weichselbaum. Gwyn (*Phila. Med. Jour.*, Dec. 10, 1898) reported a case of one of eleven patients suffering with cerebrospinal fever in Prof. Osler's wards at the Johns Hopkins Hospital. Male, aged 24, admitted as suffering from typhoid. He had not been feeling well for a few days before Nov. 1st, on which date he was seized with a severe pain in the

back of the neck followed by a chill, nausea, vomiting and fever. The following day he was worse and became delirious. On Nov. 4th his temperature was 100.8°, limbs rigid, spleen palpable, large and firm, tongue coated. Muscles of the neck and back were rigid so that the body could be lifted with the hand placed under the occiput; pulse 140, temperature 100.2°, respiration 44. Swelling and redness of both limbs, right wrist, right knee and several small joints of the hands. On Nov. 5th, purpuric spots about the feet. The swelling increased. Urine albuminous, containing hyaline and granular casts and red blood cells; a slight urethral discharge. While in the Hospital leucocytes increased from 7,000 per cubic mm. to 37,000. On this date lumbar puncture was performed, the fluid obtained was seropurulent and contained the characteristic diplococci. Cultures were obtained from the joint, from the blood, and from the fluid obtained by lumbar puncture. The patient died Nov. 6th. Characteristic lesions of the brain and cord were found and no other organisms were identified.

Infection with the Bacillus Pyocyaneus, with a Report of a Case. Eisendrath (*Medicine*, Nov., 1898) reports the case of a woman 24 years of age, with negative family history, who always enjoyed good health prior to her marriage 18 months previous to coming under observation. Shortly after marriage she suffered from leucorrhea, and 13 months later was taken suddenly ill with nausea, vomiting, headache and high fever. Chills occurred irregularly. There was at first pelvic pain followed by diffuse tympanitis. There was diarrhea which was difficult to control. There were extensive pustular eruptions over the breast, back and arm. Urine contained hyaline and granular casts. Some months after the beginning of this attack the patient was submitted to abdominal section. Intestinal coils were adherent. The left ovary was the size of a clenched fist and contained pus; it was removed. Inoculations developed pure cultures of the bacillus pyocyaneus. From the study of this case and reported cases the author concludes that the systemic symptoms present in this case are characteristic pyocyaneus infection. In children the stools are greenish in color and the disease runs a longer course. Point of entry of the organism may not be demonstrable. In more acute cases the lesions induced are vasomotor, local necroses, hemorrhages into the skin, serous and mucous membranes, lesion in the parenchyma of the heart, liver, spleen and kidneys. One of the cases abstracted by the author as examples of pyocyaneus infection in children, appears to possess the clinical characteristics of infantile scurvy.

Diphtheria Bacilli in the Urine. F. Smith, R.A.M.C.D.P.H. Durh., (*Lancet*, Nov. 19, 1898) reports that a guinea pig suffering from inoculations with diphtheria bacilli passed urine containing blood. The animal was killed, opened aseptically and cultures made from urine in the bladder. Diphtheria bacilli were found. A second guinea pig was injected with living culture and killed five hours later. The urine obtained as above was normal in appearance, but developed a plentiful growth of diphtheria bacilli in culture. The importance of these observations cannot at present be accurately weighed. We have been believing that diphtheria bacilli rarely enter the blood, a belief which this experiment goes to disprove. This further goes to establish the possible excretion of living bacilli by the kidney.

CLIMATOLOGY AND HYGIENE.

UNDER THE CHARGE OF
S. E. SOLLY, M. D., M. R. C. S.,
Colorado Springs, Colo.,
AND
GUY HINSDALE, M. D.,
Philadelphia,
Member of the American Climatological Association; Fellow of the American Neurological Association, etc.

Climate and Health of Hawaii. Lyman (*Med. Rec.*, Nov. 5, 1898) says that no more delightful or wholesome climate exists in any other part of the world. Owing to the insular position of the territory and the peculiar circuit of the currents throughout the Pacific Ocean, the extremes of heat and cold are unknown, and the hurricanes and typhoons that devastate the West and East Indies never occur. Prior to the wars of conquest a century ago, the native population was redundant. Since the advent of Captain Cook that population has steadily diminished, not in consequence of insalubrity of natural environments, but by reason of certain infectious diseases to which the aborigines were utter strangers before their contact with foreigners. Chief among these were syphilis and tuberculosis, which were propagated among the people with fearful rapidity as a consequence of their promiscuously affectionate habits. The introduction of measles from California in 1848 is usually cited as having decimated the population. This statement is not exactly correct. The disease spread so rapidly that nearly every one sickened at the same time, but it was not unusually severe. The natives, however, knew nothing of the proper treatment of the uncomfortable fever, and sought relief in frequent baths in the waters of their mountain streams and alluring surf. Almost immediately they were attacked with inflammations of the respiratory tract and alimentary canal. While thus struggling, a world-epidemic of influenza reached the islands, and attacked every person there resident. Before this infliction had passed away, the Californians sent them some choice specimens of whooping-cough, which started a third epidemic that raged with great severity among the children. Scarlatina was also imported, but did not prevail extensively.

The Cause and Prevention of Typhoid Fever with Reference to the Proposed Metropolitan Drainage Scheme (Hobart). Sprott (*Australas. Med. Gaz.*, Oct., 1898) read before the Royal Society of Tasmania an able and exhaustive paper on this subject. The author records interesting experiments made by Drs. Sydney Martin, Robertson and Gibson. These experiments prove: (1) That the typhoid bacillus is capable of retaining its vitality or multiplying to an enormous extent in certain soils contaminated with organic matter. It may live through the cold winter, to spring into activity again in summer, provided sufficient nourishment is supplied in the form of organic matter. This organic matter may be supplied by beef tea, but leaky drains, midden privies, nightsoil buried in gardens where vegetation is not active, will also supply it. (2) That the typhoid bacillus placed in the earth is capable of invading the surrounding soil and also of coming to the surface. (3) That the organism grows best in a moist,

porous soil (35 grms. per cent.) at a temperature of 37° C. (103° F.), a temperature frequently reached in the Australias, but also it is capable of retaining its vitality at ordinary temperatures. (4) Sunlight and vegetation were also shown to be inimical to the bacillus only where the sunlight was direct and only when the vegetation was active. As to the mode of infection the author thinks that the bacilli may enter our system by (1) inhalation, in the air we breathe; (2) food, including milk, meat, oysters, raw vegetables and fruits; (3) water, including lemonade, cordials and ice creams. The source of infection in connection with a water distribution is the system of surface fire-plugs placed along the streets, if not in the gutters, very close to the side channels. The practice of eating uncooked vegetables, such as tomatoes, watercresses, ettuce, etc., which come in contact with the soil is one of danger. As prelventive measures the author considers (1) careful selection of building sites, with good ventilation and plenty of sunlight in our dwellings; (2) subsoil drainage to remove all dampness; (3) paving of all yards to prevent exhalations and soakage; (4) active cultivation in gardens to keep the soil pure; (5) removal of all garbage and destruction of same; (6) a proper system of drainage to carry away all waste product.

SURGERY.

UNDER THE CHARGE OF

JOHN A. WYETH, M.D.,

Professor of General Surgery in, and President of, the Faculty of the New York Polyclinic Medical School and Hospital,

AND

CHARLES L. LEONARD, A.M., M.D.,

Skiagrapher to the University Hospital; Surgeon to the Southern Dispensary, and Associate of the Pepper Laboratory of Clinical Medicine.

Multiple Echinococcus of the Abdominal Cavity. Resser (*Medicinskoe Obosrenie*, Nov., 1898) reports the case of a woman in whom a laparotomy, performed for numerous swellings in the abdomen, disclosed about 20 cysts distributed in the abdominal cavity, some of them being attached to the peritoneum and omentum; others, again, were found in the uterine appendages. One was located in the liver, and another between the posterior wall of the vagina and rectum. Owing to the shock produced by the operation which lasted 3 hours, all of the cysts were not removed, and not until the cyst between the vagina and rectum was evacuated and ample drainage provided did the woman completely recover. A. R.

A Case of Aneurism of the Femoral Artery in a Child. An interesting case of aneurism in a child which simulated to a certain extent an abscess resulting from coxalgia is reported by Johnson (*Quart. Med. Jour.*, Oct., 1898). The differential diagnosis was made on the presence of expansile pulsation, a well-marked thrill and bruit, and the presence of heart disease. An exploratory puncture with a very fine aspirator needle was made and a little blood, bright in color, was withdrawn. It was decided to open the sac, clear it out and ligate the ends of the femoral. A provisional incision was made through the abdominal wall to permit digital compression of the common iliac artery. The sac was then opened and

cleared of clot. A temporary release of pressure on the iliac showed the opening in the side of the femoral. An aneurism needle was easily passed above and below the opening and the bleeding checked. The cavity was packed and allowed to fill up with granulations. The author believes the case to have been due to an arteritis resulting from an infective embolus. While no symptoms of malignant endocarditis were present it must be remembered that they have all degrees of virulence. He believes that infective embolus is a very frequent source of aneurism occurring in childhood.

Lymph-gland Juice in the Treatment of Cancer. Basing his theory on the fact that the malignant disease varies in its progressive infection of the lymph-glands and seldom, if ever, invades those lying above the seat of disease on the lymph stream, Snow (*Lancet*, Oct. 15, 1898) advances the theory that these lymphatic glands act not only as filters but also destroy in some way the infecting cells which come to them in the lymph stream and that the final involvement of the gland only occurs when the lymphatic gland has used up all its resisting power in the contest with the disease. He advocates the administration of a lymph-gland juice containing as nearly as possible the physiological elements of the glands in their natural state, hoping in this way to increase the nutrition of the glands and their power to overcome the infecting elements. He has already seen results which make him feel that the theory is not entirely without foundation and that it coincides with the general trend of modern scientific medication which administers to the patient that natural element which antagonizes the disease but is not present in sufficient quantities in the particular individual attacked. He hopes by advancing the theory to arouse the interest of experimental physiologists who can carry on the research in this direction scientifically.

Histology of the Varieties of Appendicitis. Pilliet (*Le Prog. Méd.*, No. 5, 1898) arrives at the following conclusions from a histological study of the various forms of follicular appendicitis: 1. Recurrent appendicitis has its principal location in the follicles. 2. Fecal concretions, which are frequently found in appendicitis, are a result of the appendicitis; they are not formed from the feces and contain no food remnants, they are derived from the mucous secretion of the Lieberkühn's glands; the latter are hypertrophied from their activity. 3. Contrary to the opinion expressed by Ribbert the author holds that the obliteration of the vermiform process is a pathological process which follows follicular appendicitis. 4. Gangrenous appendicitis in which all the coats of the organ are destroyed simultaneously is fortunately of rare occurrence. The perforation extends in these cases over a large area of the appendix. In the neighborhood of the perforation there is to be found a mixture of hemorrhagic infarction and purulent infiltration.

Surgery of the Stomach. In speaking of the progress made in the past two years, before the French Surgical Congress, in the surgical treatment of the diseases of the stomach, Roux (*Gaz. des Hop.*, Oct. 29, 1898) says that a much greater proportion of cases present themselves in time for successful operative interference, both those who come of their own accord and those sent by the general practitioner, and as a consequence the number of exploratory operations, where no relief could be given, has de-

cidedly decreased, while the results obtained by operative interference have been markedly improved. The number of pylorectomies has increased as a consequence in its ratio to the gastro-enterostomies. The former is always considered the preferable operation and early interference makes them possible. Kocher's method of pylorectomy was the one most frequently employed, while the posterior gastro-enterostomy transmeso-colic is the one preferred by this author. Suture is preferred to buttons. In speaking on the same subject, Gallet (*l. c.*) insists that the operation should be done in such a manner that there can be no regurgitation of bile into the stomach, nor of food into the duodenum. This he accomplishes in a rapid manner by making a lateral jejuno-jejunostomy with the Murphy button of small size and a posterior gastro-enterostomy with silk sutures. The intestine between the anastomosis and the point where it is attached to the stomach is divided and the ends invaginated and closed by suture. The passage of bile into the stomach is thus prevented. Jordan (*l. c.*) said that in Czerny's clinic in Heidelberg the Murphy button had been employed with absolute success, since they have confined its employment to the small intestine. When it was first employed they had three deaths from perforation but in the last one hundred cases it had acted perfectly. The button should be pressed very firmly together. Supplementary sutures are not needed. The rapidity of the operation is its great advantage. Triffner (*l. c.*) reported 62 cases, including 50 gastro-enterostomies. Pylorectomy he considers preferable to gastro-enterostomy though it is not possible to employ it as frequently. He employed both the anterior and posterior operations and believes they should be used according to the case, and not with any preconceived idea of the value of either in all cases. He employs sutures uniting the mucous and serous layers separately. Roussel (*l. c.*) described a new method as employed by Doyen for performing posterior gastro-enterostomy. It differed from that of Roux in that the anastomosis was lateral instead of being terminal. The gastro-enterostomy should be, when possible, trans-mesocolic and in the posterior wall of the stomach as it places the orifice in the most dependent portion of the stomach and permits more complete emptying. Monprofit (*l. c.*) reported the results of 19 operations. In 14 for cancer 2 died from the shock of the operation in the first twenty-four hours, the autopsies showed no failure in technique. 10 of the cases were greatly benefited. 2 continued to vomit and apparently received no benefit. 5 gastro-enterostomies performed for chronic gastritis supported the operation well and in all the trouble from which they suffered was relieved. In 9 cases Woelfler's operation gave 5 perfect results, 2 satisfactory and 2 bad. 6 operations by von Hacker's operation gave 5 excellent results and 1 fair. 2 by Roux's Y method were perfect. This author prefers the silk suture. Guinard (*l. c.*) called attention to 3 cases of perforating ulcer of the stomach where the only symptom was a sharp lancinating pain in the epigastric region. They were all young patients who had shown no previous symptoms, all died and in but 1 was the perforation discovered before death. He also presented a woman in whom he had successfully sutured a perforating ulcer of the stomach.

LARYNGOLOGY AND RHINOLOGY.

UNDER THE CHARGE OF

D. BRADEN KYLE, M.D.,

Clinical Professor of Laryngology and Rhinology in the Jefferson Medical College, Philadelphia; Consulting Rhinologist and Otologist to St. Agnes' Hospital, etc.,

ASSISTED BY

W. H. KING, M.D.,

Assistant Otologist, Pennsylvania Hospital Out-patient Department, and Associate in the Throat and Nose Department of the Jefferson Medical College Hospital.

Maxillary Pneumosinus of Cystic Origin. Fremont (*Rev. Heb. de Lar. de Otol., et de Rhinol.*, Nov. 5, 1898), says that the term pneumosinus is due to Lermoyez. Luc describes in the *Archives* for May, 1898, two cases of frontal pneumosinus. Both followed intervention directed to the fronto-maxillary cavities. In the first case there was nasal discharge showing infection; in the second an injudicious insufflation. In both cases there was excess of internal pressure. Here is a case resembling the other two closely, not, however, depending on external and remote causes. The pathogenesis is entirely different. The emphysema is evidently due to the same cause (exaggerated intra-sinusal pressure), but in our case the perforation of the cutaneous side of the sinus is produced spontaneously under the influence of a compression prolonged for some time and aggravated by the presence of a benign neoplasm situated on a line with the sinus. The facts follow: Lec . . . , 42 years old, carpenter, at Mondeville, near Cayen. Inflammation of the lungs at 15 years. No other disease. He had been a soldier for years; had had gonorrhea. Syphilis denied. I could find no trace of it, but the 5 years spent in the service in connection with the maxillary necrosis perplexed me and caused me to institute a line of eliminative treatment which I otherwise should not have done. In October last the trouble began with a terrible toothache with considerable swelling involving the entire right jaw. The swelling began close to the naso-genial fissure on a level with the canine fossa. After 4 days the swelling disappeared rapidly and the parts returned to normal. In December there was a recurrence of the same phenomena lasting 1 day. In February another attack dissimilar to the two preceding. The generalized swelling was absent, on the contrary it was accurately circumscribed to a circular surface 6 or 7 centimeters in diameter. The skin detached from the underlying bone is as if blown up, considerably stretched, thin and translucent, about the size of an orange; after 3 or 4 days it totally disappeared. In April another attack which lasted 6 weeks. The large sized tumor appeared instantly, then disappeared little by little. The same thing occurred frequently. It was then that the patient sought medical aid. A physician incised the tumor, allowing the escape of air which had inflated it. After 2 or 3 days, the lips of the incision healed and the tumor regained its former size. It was at this time that I first saw the patient. He complained bitterly of severe pain in the entire region affected as well as the frontal sinus and throbbing of the left temple. The tumor was spheroidal in shape (6 centimeters in diameter), situated between the external angle of the left eye and the canine fossa. The nasal examination revealed nothing abnormal; no pus in the hiatus. The maxillary and frontal sinus were minutely examined. Heryng's sign negative,

Wohsen Davidson's sign negative, sign of Garel Bruger negative, sign of Robertson negative, illumination of the frontal sinus negative. These confirmatory proofs caused me to admit the integrity of the sinus. Exploration of the region with the finger revealed but one thing—crepitation. Strong compression failed to reduce the tumor's size. A small thin trochar forced into the tumor allowed the escape of air. Compression now considerably reduced the tumor's size but did not entirely efface it. The same illumination tests were employed with negative results as before. But other very important signs appeared. The finger placed perpendicular to the anterior aspect of the sinus could be inserted in a hole about 1 centimeter in diameter. This hole is to the right of the center of a line joining the external angle of the eye and the second molar. Immediately below this hole is a small pyriform tumor quite hard and adherent, as large as a hazelnut and a little flattened. It was the first time that the foramen and tumor were seen. The crepitation subsided. I asked the patient to blow his nose and the large tumor reappeared instantly. Another puncture was followed by a disappearance of the tumor. There is no doubt that we have a perforation of the anterior wall of the maxillary sinus with consequent emphysema. It remains to discover the etiology of this perforation. Specific treatment does not modify the course of the disease. Examination of the teeth put me on the track of the pathogenesis of the lesion. The two first molars had been drawn for a long time, but the extraction was incomplete and the roots are still in the alveolar process. The pain caused by pressure on the gum as well as its appearance shows a periodontitis at this level. Now, the origin of cysts at the roots of the teeth seems to give the key to the lesion. That is to say, a chronic inflammation of the alveolo-dental periosteum causes a stripping of the surface of the root. The result is the formation of a cavity whose contents are serous or purulent depending on the intensity of the inflammation. The wall is made up of the denuded periosteum, thickened, a true cystic membrane. This little cyst developing slowly, forces itself gradually into the bone and remains there (intra-osseous cyst), or it perforates, finally arriving at the periosteum where it develops between the periosteal membrane and the bone (sub-periosteal cyst). This cyst growing constantly in the case under observation on the anterior surface of the sinus perforated it at last by a process identical to that which would happen under the periosteum in a true alveolar cyst. With this idea I drew the two roots. One of the two came easily, the cement was wrinkled; pieces roughened on the surface are elevated, the others rested in the alveolus. In order to extract them complete and avoid forever the emphysema by the increased pressure, I made a large perforation in the diseased alveolus. The border of the gum was anesthetized completely with chloride of ethel, and with the aid of a drill I established communication between the alveolus and the sinus. As I did so a liquid, either serous or purulent, I cannot say which, escaped. I was especially desirous of saving it out of regard for the cystic hypothesis, but the blood prevented me. A stylet introduced into the sinus appeared through the hole on the anterior surface of the cavity and raised the skin. With a curved curette I denuded the borders of this orifice, and to close it, made permanent pressure. The patient suffered no evil effects from this procedure and returned 8 hours afterward. The emphysema had completely disappeared; there was no crepitation; a little pus trickled through the

alveolar opening. The small tumor persisted, as well as the orifice on the side of the sinus, but its diameter was notably decreased. I recommended washing the mouth frequently with strong antiseptic solutions. I saw the patient again 12 days afterward. He was completely cured. There was no opening nor tumor; suppuration had ceased. The alveolar fistula still persisted, very much reduced in size. Two months later he returned with the cure still complete.

Contribution to the Study of Paralysis of the Larynx of Central Origin. Meillon (*Rev. Heb. de Lar. de Otol. et. de Rhinol.*, Nov. 19, 1898). The author's study is divided into two parts: first, an anatomic study of the origin of the laryngeal nerves, and second, an "anatomo-clinic" of laryngeal paralysis. Doctor Meillon relates several cases demonstrating the existence of a cortical center and bulbar projection of the laryngeal nerves and has arrived at the following conclusions: There exists in man a cortical center of the larynx occupying the posterior part of the foot of the third frontal and all of the foot of the ascending frontal convolutions. This center has a unilateral and crossed action. In all of the cases observed the respiratory center is not separable from the phonatory center and laryngeal paralysis was shown in the laryngoscope by the cord being in the cadaveric position. Section of the central laryngeal fibers subcortically or in the knee of the internal capsule produces the same result—total paralysis. There exist reflex centers for the larynx, those of phonation, others of respiration. These extend from the posterior quadrigemina to the superior part of the medulla, their precise locality being still under discussion. There exists a laryngeal paralysis of bulbar origin. It is a complete paralysis of the vocal cord in the cadaveric position. This paralysis is observed in the course of the disease described by Millard Gubler. The prognosis of these paralyses is grave because of the access of suffocation which may terminate the disease (*These de Doctorat*, Paris, librairie Paul Delmer, 1897).

OPHTHALMOLOGY.

UNDER THE CHARGE OF

WALTER L. PYLE, A.M., M.D.,

Assistant Surgeon to Wills Eye Hospital, Philadelphia.

The Treatment of Sloughing Corneal Ulcers. Percy Dunn (*Lancet*, Oct. 22, 1898) believes that sloughing ulcers of the cornea are best treated from the first with eserin. The strength of the drug used is half a grain to the ounce, and this proportion is never exceeded. Generally speaking two instillations a day will be found to be sufficient, but if more is considered advisable there need be no fear of pain or irritation from this strength solution. Hot fomentations are absolutely needful, and some antiseptic solution is preferred. Dunn advises chinosol. In addition to the local treatment the patient should have good food in abundance, as well as a preparation of quinine and iron. Nursing mothers affected must wean their infants. Dunn urges the use of the actual cautery (on a surface delineated with fluorescin) in the worst infected ulcers.

Irrigation of the Nasal Duct by a Fountain Syringe. Jones (*Brit. Med. Jour.*, Aug. 20, 1898) described a new method of irrigating the lacrimal duct, *i. e.*, a silver cannula the same size as Bowman's No. 6 probe is passed into the duct immediately after slitting the canaliculus. A head of water 8 to 10 feet is required. The stream is allowed to pass through the nasal duct several times. A boracic acid solution is used, and the length of time for which the solution is passed depends largely on the patient's forbearance. Jones found no difficulty in passing the No. 6 probe into the duct after previously slitting the canaliculus in half its length. This treatment has produced the best of results in many cases of lacrimal inflammation and so-called stricture. It is certainly more rational than the brutal probing now in vogue. It is difficult to understand why intelligent oculists mutilate a delicate canal of such exquisitely fine physiologic function until it becomes a mere fibrous drain-pipe.

Resection of the Cervical Sympathetic in Glaucoma. Jonnesco (*Recueil d'Ophtalmologie*, Aug., 1898) has performed this operation seven times in the last year. The results were an immediate cessation of pain, fall of tension, reduction in the size of the pupil, and improvement of sight when the optic nerve was not already totally destroyed. Jonnesco removes the superior ganglion and makes a premastoidal incision. The technique of the operation is minutely described.

The Use of Formalin in the Treatment of Blepharitis. Moulton (*Jour. Am. Med. Ass.*, Sept. 17, 1898) has used formalin in all his cases of blepharitis. He first carefully corrects any refractive errors, and administers to any local or general condition which may predispose the lid-margins to the disease. Formalin has produced a cure when all other local applications failed. The solutions are made of strengths from 0.2 per cent. to 1 per cent., beginning with the weaker. It must be frequently renewed to secure uniformity of strength. The lid is drawn away from the eyeball, and a small cotton mop dipped in the solution is rubbed gently along the margin of the lid until all the scales and crusts are removed and until the surface of any little pustule is rubbed off. The mop is moistened several times in the solution. The applications are made daily, preferably by the physician to insure thorough cleansing. A little bland oil may be used afterward, or the formalin may be used in oil.

A Sewing Needle in the Liver. Dr. Peters reports in the *Canadian Practitioner* a case where a sewing needle in the bodice of a mother penetrated the body of her child while being caressed and embraced. When two days later an operation was performed the needle was found almost buried in the liver, its eye just within the sheath of the right rectus muscle. It was readily removed, and found to be black in color but smooth. The child recovered.

An Early Sign of Tuberculosis. Lounsberry believes that a constant temperature-elevation ranging from 99° to 101° is the most constant early symptom of incipient tuberculosis. He has been thus able to detect the tubercular element months before any positive physical signs appeared in the chest.

GENITO-URINARY SURGERY AND VENEREAL DISEASES.

UNDER THE CHARGE OF
J. D. THOMAS, M. D.,
Professor Genito-Urinary Diseases, Western Pennsylvania Medical College (Medical Department Western University, Pittsburg); Genito-Urinary Surgeon to the South Side Hospital; Ex-Vice-President American Medical Association, etc.,
AND
A. ROBIN, M. D.

Communication on Extra-genital Syphilitic Infections. Sternthal (*Allg. Wiener Med. Zeit.*, No. 39, 1898) observed fourteen cases of extra-genital chancre, half of which were in women. Seven cases presented the lesion on the lips, which was communicated to them mostly through kissing. The diagnosis was not difficult to make. Chancre on the finger was observed in three instances in midwives and physicians, one of them a dentist. The author recommends that midwives, nurses and all others who wait on the sick and who are suffering from syphilis give up practice during the infectious stage, *i. e.*, for at least two years. Physicians and dentists must refrain from practice until the acute primary stage has passed. In two instances the primary affection of the mouth resulted from dental instruments. In one case the chancre appeared on the tonsil in a woman forty-two years old, the medium of infection being a spoon which she used for administering medicines to her syphilitic husband. In one case the chancre appeared on the pubes. Especially interesting is the case of a young woman who suffered from a chancre of the right breast, resulting from nursing her syphilitic child. This, then, would be an exception to Colles' law.

The Inunction Cure. Schuster (*Klin. therap. Woch'schrift.*, Nov., 1898) considers the inunction treatment of syphilis as the best method of medication. It is entirely painless, thus offering advantages over the injection-method. It does not disturb digestion, as internal medication does, nor is salivation readily induced. Cases not suitable for inunction are patients with irritable skin in whom it produces either a scarlatinoid rash or eczema, patients with a preponderance of hair in whom the rubbing is liable to produce excoriations, and those whose skin is dry or covered with cold sweat. The treatment is begun as soon as syphilis is suspected. The modus operandi of the inunction the author ascribes to the volatile property of mercury which is absorbed by the skin in the form of vapor. The use of warm sulphur-baths in conjunction with the inunctions is also very beneficial. To obviate the objectionable features of the ordinary blue ointment the author prefers a soft soap which is made by Neunerdt and Smidt, in Hanover, according to the following formula devised by him.

Hydrargyri depurati,	33⅓ %
Sapon. oleacei albiss. pulver.,	12⅔ %
Sebi filtrati,	18 %
Adipis filtrati,	36 %.

This soap mixes easily with water, stains the skin but slightly, and is easily washed off in the course of a few days.

Bottini's Galvano-Caustic Treatment of Prostatic Hypertrophy—A Preliminary Report of 3 Cases. Carleton (*Med. Times*, Dec., 1898), having performed the usual operations for prostatic enlargement with variable success, has finally adopted the Bottini's galvano-cautery incision, which, he claims, invariably results in a cure. The objections to the complex and cumbersome instrument were removed by the modification of Freudenburg, which makes the operation comparatively simple. After describing minutely the instrument and its accessories the author describes the operation which, briefly, consists in making three grooves with the galvano-cautery incisor, one in the prostatic urethra towards the symphysis, a similar towards the rectum, and a third in the larger of the lateral lobes. The operation is done under cocaine anesthesia and requires no further attention, the patient being up in from two to four days. The author reports 3 cases in which the operation was successfully performed. He finally concludes that from his experience and investigation of the subject the Bottini operation will be the one of choice for prostatic hypertrophy, when the fibrous elements predominate. It will give the best results when retention of urine of prostatic origin has not been complicated by cystitis; being particularly indicated for the contracted fibrous prostate.

Antistreptococcus Serum in the Treatment of Primary Venereal Sores and their Complications. Moore (*Brit. Med. Jour.*, Nov., 1898) was led by the analogy existing between streptococcus infection and chancroid to try the injection of antistreptococcus serum in the latter affection. He usually injects from 5 to 10 c. c. subcutaneously into the inguinal region corresponding to the inflamed gland. In 48 cases of acute inflammatory bubo, subjected to this treatment suppuration took place only in 7. In one bad case of phagedenic chancre he was enabled by repeated withdrawal of the serum to assure himself that the favorable results were produced by the latter and not by the other medication employed. The author finally concludes that if 5 c. c. of the serum are injected subcutaneously into each inguinal region in cases in which inflammatory bubo is likely to develop, it will prove a good prophylactic measure and assist in healing the chancroid. If inflammatory bubo has already developed, and symptoms have not been present more than 48 hours, 10 c. c. will cause resolution in the majority of cases. If pus has formed the serum may possibly limit the extension of the suppuration.

Inheritance of Syphilis. Finger says there is undoubtedly a purely paternal as well as purely maternal syphilitic inheritance. The purely maternal syphilis may be transmitted to the fetus through the ovum or may be post-conceptional—transmitted through the placenta. The former is not proven, but only acknowledged as probable by analogy with the transmission through the semen, while the latter has been proven by a number of exact clinical observations. Syphilis in the mother, even when acquired in the last months of pregnancy, may pass to a fetus conceived while both parents were sound.

GYNECOLOGY.

UNDER THE CHARGE OF

EDWARD E. MONTGOMERY, M. D.,

Professor of Gynecology, Jefferson Medical College; Gynecologist to Jefferson and St. Joseph's Hospitals, etc.,

AND

WILMER KRUSEN, M. D.,

Instructor in Gynecology, Jefferson Medical College; Assistant Gynecologist, St. Joseph's Hospital, Gynecologist, Charity Hospital of Philadelphia, and Chief of Dispensary for Diseases of Women, St. Joseph's Hospital.

After-Effects of Surgical Procedure on the Generative Organs of Females for the Relief of Insanity. James Russell (*Canadian Practitioner*, Oct., 1898) believes that while gynecology has its relation to psychiatry among the insane just as it has among the sane for the relief of physical distress, yet to extol it as a great curative method in the treatment of insanity is nothing short of absurdity. Common sense, as well as statistics, proves that sexual disorders in women cannot be such a prolific cause of mental disease as the psycho-surgical gynecologist would make us believe. Russell is of the opinion that surgical interference should be resorted to with the insane as with the sane only when there is a physical indication for operation, but seldom or never as an experimental procedure for the relief of insanity.

Secondary Abdominal Operations. Malcolm (*Ind. Med. Record*, Nov. 1, 1898) reports twenty-six cases in which an abdominal operation had been performed a second time. In the first eight of the series the second operation was performed on account of a return of the disease after a period of good health. The second group consists of five cases in which the first operation was insufficient to effect a cure. In the remaining thirteen cases the second operation was required on account of some complication arising as an immediate or remote consequence of the first. Among the causes may be found ovarian tumors arising in the second ovary after the removal of the first; rupture of the abdominal wound; slipping of ligatures; and in one case the inverted fundus of the uterus had been mistaken for a polypus and removed by means of scissors.

Ovariotomy. Ruth M. Thomson (*China Med. Missionary Jour.*, Oct., 1898) reports the successful removal of a large multilocular ovarian cyst. In March the patient, a married woman aged 28 years, entered the Canton hospital; she was anemic, the abdomen greatly distended, limbs edematous, and lying down caused great discomfort. Operation March 30th. The initial incision was 2½ inches in length, the sac was punctured and 70 lbs. of light brown fluid flowed out. There were extensive adhesions between the intestines, abdominal walls, and the right broad ligament; the incision was enlarged and the sac removed; the pedicle, 3½ inches in length, was ligated, cut and Paquelin cautery applied; the abdominal cavity was irrigated with saline solution, and drainage introduced. Although the patient was very much shocked, reaction occurred and the convalescence was uninterrupted.

Moot Points in the After-Treatment of Cases of Abdominal Section. 1. Posture. Martin (*Med. Press and Circular*, Nov. 2, 1898) does not

believe the patient should be kept rigidly on her back for 48 hours after operation, but should be permitted to lie in any attitude that is most comfortable to her, and he allows the nurse to turn her from time to time. 2. Dressings should be of a simple character. He covers the incision with a pad of iodoform changed at the end of 24 hours, after which it need not be disturbed for a week. 3. Sutures. He uses the interrupted silkworm-gut suture, passing it through the whole abdominal wall, and let the sutures remain in from 12 to 14 days. 4. Drainage. "When in doubt don't drain." He prefers iodoform gauze to the glass or rubber tube; and, if possible, drains through the posterior vaginal fornix. 5. He always gives a dose of morphia at the close of an abdominal operation, either hypodermically (¼ gr.) or by suppository (½ gr.). This single dose of morphia is not sufficient to paralyze the bowel or to interfere with the purgative treatment of peritonitis, should this complication subsequently occur. 6. Purgatives withdraw the fluid from the congested portal veins, promote ab sorption, mechanically remove the excreted toxins from the intestinal canal, and by stimulating peristaltic movements combat the tendency to paralysis of the bowel, diminish the tendency to intestinal adhesions, and mechanically remove flatus. 7. Dietary. Martin is satisfied that the early administration of fluids is not only merciful but does good; it diminishes shock and restlessness, fills the depleted blood vessels, and, by washing out the kidneys, helps to remove toxins from the system. 8. Date of getting up. If there are no complications, the patient may sit up in bed on the 14th day, get out of bed on the 15th or 16th day, and leave the hospital during the fourth week. 9. Belt. Patients who have undergone abdominal section should wear a well-fitting belt for at least two years after operation. In conclusion, no hard or fast rule can be laid down which applies to all cases. Every case must be treated on its own merits.

Stones in the Ovary. Ries (*Annals of Gyn. and Ped.*, Nov., 1898) reports observations made in three cases seen in one year. The fragments of two of the ovarian calculi were submitted to qualitative analysis and both were found to be composed of a mixture of organic and mineral compounds; the former consisted chiefly of fibrous materials with minor quantities of fat and cholesterin, while the mineral matter was made up of the carbonates and the phosphates of calcium and magnesium, with unimportant traces of chlorides and sulphates, presumably of sodium and potassium. The convolutions of the surface of the stones resembled exactly inside, as well as outside, those of the corpus luteum and undoubtedly took their origin in simple corpora lutea.

Report of the "Congres de Gynecologie, d'Obstetrique et de Pedietrie" at Marseilles. Prof. Pinard in his opening address (*Gaz. de Hôpitaux*, 1898) spoke on the close relationship of gynecology, obstetrics and pediatry, all seeking both the preservation of the individual and the continuation of the race. It is necessary to guard jealously the health of both mother and child, but it is especially from the infant that one hopes for the improvement of the race. Prof. Pinard said the physician ought to concern himself with the infant before its procreation. This assertion may cause a smile, but nothing is more serious. That hereditary syphilis may be avoided, the attainted parents should have preventive treatment. It is necessary to prove to them the importance of such treatment, to show them

that reproduction is a crime unless they are willing to submit to rigorous therapeutics. That is not all, there is a terrible flood which rises and advances most threateningly; alcoholism with its sad consequences, follies and all sorts of degeneracy. From such evils it is the duty of every physician to defend the race. The act of procreation is of such importance that it should never be left to chance. Every honest man ought to prepare himself for it. If each one is permeated with these ideas essential for the nation, we shall soon see arise a commonwealth of healthy, vigorous citizens, seeking always liberty and progress.

OBSTETRICS.

UNDER THE CHARGE OF

RICHARD C. NORRIS, M. D.,

Lecturer on Clinical and Operative Obstetrics in the University of Pennsylvania; Physician-in-Charge, Preston Retreat; Gynecologist to the Methodist Hospital; Visiting Obstetrician to the Philadelphia Hospital,

AND

DOWLING BENJAMIN, M. D.,

Camden, N. J.,

Obstetrician and Gynecologist to the Cooper Hospital,

ASSISTED BY

WILLIAM F. CRAIG, M. D.,

Philadelphia.

Pan Hysterectomy. Brewis (*Scottish Med. and Surg. Jour.*, Nov., 1898) reports a case of total hysterectomy during pregnancy for rapidly growing fibro-myomata. On operation there was found a hard tumor united to the right cornu of the uterus by a pedicle two inches long. The lower portion was composed of the uterus enlarged to four months. Projecting under the peritoneum were a number of small fibroids. On the left side of the corpus uteri was a round tumor which would have been a serious barrier to delivery had the patient gone on to term. Myomata and uterus were removed, and the patient made a good recovery. The rapid growth of the tumor and the pain pointed to malignancy. Such was not the case. Modifications of the usual operation were (1) using clamps on the uterine arteries; (2) making the opening of the posterior fornix not into Douglas' pouch; (3) stitching the anterior and posterior flaps of peritoneum over the clamp and gauze, thus shutting off the peritoneal cavity from the vagina.

Operation for Extra-Uterine Pregnancy at Full Term. H. C. Dalton (*Med. Rev.*, St. Louis, Nov., 1898) reports a case of extra-uterine pregnancy operated on at full term. This was one of those rare cases in which both mother and ovum survived tubal rupture and proceeded to the end of gestation. The only reason for delay in operating was the good condition of the mother. Dr. Dalton is of opinion that there can be no advantage in waiting for the full term of pregnancy. Such a course involves danger to mother and the prospects for the child do not warrant such delay.

Differential Diagnosis Between Extra-Uterine Pregnancy and Early Abortion. H. N. Vineberg (*Med. Rec.*, New York, Nov. 5) gives his experience for the past few years in the study of extra-uterine pregnancy. The condition that it is usually mistaken for is abortion. So also are cases

of abortion mistaken for ectopic gestation. In a series of cases the most constant symptoms were fainting spells, attacks of pain, irregular uterine hemorrhages. The physical examination greatly aids the diagnosis. There is one condition where a diagnosis is particularly puzzling; this is in cases of elongated cervix with a displaced uterus. These are readily mistaken for cases of extra-uterine pregnancy except by the experienced.

Mastitis Treatment by Bandaging and Rest. J. B. Jackson (*Amer. Prac. and News*, 1898) gives an experience of 14 years in the treatment of mastitis. The usual methods are mentioned, but particular stress is given to rest and bandaging. A careful study was made of the cat, bitch and ewe. These animals are often deprived of their young and yet mastitis is singularly rare among them. Observation leads to the conclusion that rest is the most important element in the treatment. Rest is secured by the aid of a bandage best applied to the breasts in a figure-of-eight fashion.

Treatment of Placenta Previa by Induction of Labor and Version. M. Fournier (*L'Obstétrique*, 1898) reports his experience with cases of placenta previa. In the last 3 months of gestation his treatment consists in the induction of labor and version. Two principles are laid down in support of this treatment. First, unless these cases are interfered with, the patient runs a great risk and may die from loss of blood. Second, if the uterus is empty it will contract upon the vessels and the danger from hemorrhage will be removed. To be effectual, treatment must be prompt and under rigid antisepsis.

The Importance of Artificial Abortion with Treatment of 60 Cases. At the French Congress for Gynecology, Obstetrics and Surgery, held at Marseilles, Oct., 1898 (*Klinisch-therapeutisch Woch'schrift*) Hucklenbroich read a paper on the importance of abortion and the treatment of 60 cases. Of this number abortion was induced in 29 cases, 26 for narrow pelvis, 3 for vomiting of pregnancy. One patient died of septic peritonitis, the others recovered fully. The method employed was that of Krause, *i. e.*, the introduction of a stiff bougie surrounded by iodoform gauze tampons. The tampons were renewed, when necessary, in 24 hours. In most cases, however, pains came on in 1 hour. Of the 49 children born alive, 22 died shortly, showing the high mortality in these cases.

Hydrotherapy in Stomach Diseases. Dr. G. D. Kahlo is of the opinion that water ranks first among the therapeutic agents. Cold applications, he says, are antiphlogistic, and sedative when prolonged. They are indicated in acute gastritis, vomiting and hematomesis. On the other hand hot applications are indicated in gastralgia, hyperesthesia, gastric ulcer and chronic gastritis.

INTERNATIONAL MEDICAL MAGAZINE.

A Monthly Journal of Medical and Surgical Science.

Edited by

BOARDMAN REED, M.D.

Contributions of original articles, clinical memoranda, and other matter of interest to the Medical Profession, are solicited from all parts of the world. Contributors will be furnished with a liberal number of covered reprints as compensation, provided a request for same accompanies their manuscript.

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PHILADELPHIA, DECEMBER, 1898.

Announcement.

Hereafter the business management of the INTERNATIONAL MEDICAL MAGAZINE will be conducted by Messrs. E. B. Treat & Co., of New York, the well-known publishers of the *International Medical Annual* and other works. The editorial control will remain as at present and our efforts will be redoubled to make the INTERNATIONAL the best all-around medical monthly.

Consultations with Specialists.

The unavoidable increase in specialism and the resulting multiplication of specialists are in some respects injurious to general practitioners. Patients of means and the over anxious ones in all the walks of life are prone to become restive and seek extra advice from physicians reputed to be unusually skillful in the diseases from which they believe themselves to be suffering. This is true not only of those who are ill in bed, but even more so of walking patients afflicted with chronic maladies. The former cannot be gratified in this respect except by a formal consultation, the desire for which is made known to the family physician; but the walking patient very often says nothing about his desire as to further advice, but goes straightway and gets it by calling upon some specialist at his office. In the case of such a universally recognized specialty, as that of the eye, it is now well understood that the majority of persons in cities select their own ophthalmologists as they do their dentists. This, of course, is not as it should be. The family physician should first be consulted concerning everything pertaining to the health or physical well-being of those under his charge and recommend a specialist when one is needed.

The reprehensible tendency of the laity to decide these matters for themselves is possibly due in part to the fact that many practitioners

rarely suggest a consultation even in their most stubborn and difficult cases until urged by the patients or their friends to permit one and then sometimes interpose objections. The most successful physicians we know never object to a consultation, though usually insisting when possible upon their right to select the consultant. To protest against meeting another physician in a case is usually impolitic and indefensible, especially in cities where ethical consultants who are in no sense rivals, can always be had. It is apt to lessen confidence and lead (in chronic cases at least) to surreptitious visits to the offices of men who are not likely to be as able or careful of the interests of the family physician as the specialists whom the latter would have recommended.

There are two obvious remedies for this growing habit among the laity of running off to specialists without the consent or knowledge of their usual medical advisers. The first is to have the family physician master as much as possible of the newer lore in all the branches of medicine so as to be able to treat with a large measure of skill and success most of the cases that come before him without the need of consultations. Not that it will be practicable for him to learn, with ever so much pains, to do as well in every one of the various departments into which modern medicine has come to be divided, as some of the men who have had the best special training and a larger experience in them. It would be absurd to expect the most accomplished general practitioner besides attending to all his obstetric and pediatric work, his fevers and influenzas and pneumonias, along with all his ordinary general surgery major and minor, to be able at the same time to perform skillfully abdominal sections and intralaryngeal operations, or to keep up perfectly with all the most recent advances and discoveries in the abstruse subject of neurology or of digestion and assimilation. But by taking occasionally during his dullest season a course at some polyclinic, buying books liberally and reading regularly a number of the best medical journals, he ought to be able so to perfect himself in his art that a very large proportion of even his chronic cases could be successfully handled without the help of specialists. Failing the time or money to do all these things, if he takes and reads carefully the INTERNATIONAL MEDICAL MAGAZINE, he will go far toward accomplishing the same result. Our system of teaching the most important and practicable features of the specialties by means of Talks to General Practitioners is designed to meet this very want.

The second remedy is never to try to dodge a consultation but rather to welcome one whenever it would be of advantage to the patient.

When the ailment is one like eye-strain which men in general practice as a rule are not expected to understand or treat; when it involves a surgical operation which the physician has never done, or a difficult chemical analysis such as that of the stomach contents, which he feels he is not equal to; or when it involves serious complications of any kind as to which he knows that the unusual knowledge and skill of a specialist would be

very desirable, he should promptly seek a consultation with some confrere concerning whose loyalty and ability there can be no question. We place loyalty or strict ethical conduct before ability, because there are consultants enough in every department of medicine who besides being competent are thoroughly careful always to protect in any contingency the interests of the family physician.

A Symposium on the Trestment of Gastric Diseases.

The notable discussion on the treatment of diseases of the stomach in the Section of Pharmacology and Therapeutics at the last meeting of the British Medical Association brought out strongly the fact that the United States have become a very important center of activity in this special field. George Herschell opened the discussion with a thoughtful and valuable paper in which he gave generous recognition to the work of our American specialists. He drew largely upon Hemmeter's great work, which he seems to have studied well and with advantage, quoting in full the latter's excellent summary of the indications for what is described under the title of "gastric massage," and for what Herschell himself calls "massage of the stomach," though a more correct term is massage of the abdomen, since in normal conditions a very small part only of the stomach is accessible to massage, about four-fifths of it being behind the ribs and sternum. It is the large and small intestines which occupy in health most of the region popularly, and especially by women, designated as the stomach. By the way, there is a peculiar appropriateness in this misuse of the word by the weaker sex, since the stomachs of the majority of civilized women, as a result of their dress and inactive habits, encroach decidedly upon the domain of the intestines and occupy a large part of the space which belongs to the latter.

Herschell did not mention the important contraindications to massage of the abdomen given in Hemmeter's book, and evidently had not seen the fuller list of such contraindications, including hyperchlorhydria, which were contained in a communication to the INTERNATIONAL MEDICAL MAGAZINE by its present editor in January last, though the entire paper was republished shortly afterward in the *Medical Press and Circular* of London.

It is a hopeful sign of the times that in England and America, as well as in France and Germany the non-medicinal treatment of gastro-intestinal diseases is coming more and more into prominence. In Herschell's paper stress was laid upon the following agents as generally useful: Electricity, massage and mechanical therapeutics; hydrotherapeutics and local treatment of the stomach by lavage, spray, douche, or the gyromele of Turck. The author strongly recommended galvanism to the nucha and to the ganglia of the sympathetic and vagi in the neck with one pole over the solar plexus for atonic conditions of the stomach. He makes the application as follows:

"The patient is placed upon his back upon a couch, and the negative electrode applied to the nape of the neck, the anode being placed upon the epigastric region. Both electrodes are flat flannel-covered plates, having each an area of 12 square inches, and remaining stationary during the application, which consists of from 3 to 15 m.a. passed for from five to ten minutes. The electrode is then removed from the nape of the neck, the rheophore attached to a 3-inch disc electrode, the epigastric plate remaining in position. The current is then reversed, and the disc applied for one or two minutes in succession to each of the ganglia of the sympathetic in the neck, a current strength of 1 or 2 m.a. only being employed."

The author prefers the above method to intragastric electrization. Another wrinkle seems worthy to be described in his own words:

"I will take this opportunity of drawing your attention to a special form of electric application which I have recently found to be very useful in the treatment of atony of the bowel and constipation. It is a primary coil, such as is constructed for giving faradic baths, and not only is wound with very thick wire, but is capable of giving very slow interruptions. It appears to me to really set up peristaltic action in the intestines. I have on several occasions seen its application cause an immediate stool. It also acts quite as efficiently as massage and muscular exercises in restoring tone to the abdominal muscles. In using it I place an indifferent electrode on the buttocks, and apply the other pole with a roller electrode over the abdominal muscles and over the intestine following the curve of the colon, and using interruptions of from 120 to 200 per minute. It has also given good results in cases of atony of the stomach."

Ewald was a guest of honor at the meeting and his conspicuous part in the discussion has been hitherto referred to in the INTERNATIONAL. He emphatically seconded the remarks of Saundby as to the efficacy of rest in bed with massage and went a step further in adding his belief that for many stomach diseases, especially those of nervous origin, the best way to treat them was to send them away from home to a suitable sanatorium.

Turck, of Chicago, was also present, and his contribution to the subject included an interesting survey of the various methods now in vogue for the treatment of gastric myasthenia, ending with a description of his own ingenious contrivance for pneumatic gymnastics.

The names of the two most distinguished stomach specialists of London are missed from the number of those who participated in this extraordinary discussion. We refer to Professor Sidney Martin, author of the leading English work on diseases of the stomach, and Dr. W. Soltau Fenwick, who is well known for his valuable writings on digestive disorders in both adults and children. They would have made the brilliant galaxy complete.

The Anti-Vivisection Humbug.

A marked copy of the journal called "The New England Anti-Vivisection Society Monthly," which has been sent us, is filled with the usual drivel with which the country is flooded periodically by these misguided fanatics. It is a tempting theme for editorial sarcasm, but why waste arguments or words of any kind on

people who cannot reason? Physicians, who alone read medical journals, do not need instruction on this subject. With the exception of an exceedingly small sprinkling of intellectual weaklings they are in as little danger of being infected by the maudlin sentimentality which would refuse to make use of animals with all humane precautions to relieve human suffering, as they are of apostasizing into Christian Science or Osteopathy.

What is needed to save the poor gullible public from the consequences of all these silly isms and erratic delusions is to have appointed regularly a committee of scientific medical writers whose duty it shall be to show them up in the lay press. It is necessary to fight the devil with fire and on his own ground. It is quite useless to expose such lunacy in our medical societies or medical journals.

The Harveian Lectures.

Dr. William Ewart delivered the series of lectures before the Harveian Society of London on the evenings of December 1st, 8th and 15th. His first lecture on "Disease, its Treatment and the Profession of Medicine in 1899," which we find in the *Lancet* of December 17th, is in a very interesting vein. It is full of striking thoughts felicitously expressed. Under the sub-head of "Medicine Vindicated," the lecturer, while recognizing "the brilliant record of surgery," holds that "the achievements of medicine have been unnoticed or minimized." His view is that while surgery has been more successful in making cures of individuals, medicine has done more in the way of protecting whole communities from decimating diseases such as typhus fever, smallpox, cholera, etc.

Our Talks.

The present number of the INTERNATIONAL gives an approximate idea of what our new system of "Talks to General Practitioners" was intended to be. Professor Montgomery presents another contribution to his admirable exposition of the commoner gynecological affections. Professor J. D. Thomas, of Pittsburg, begins a course of short practical lectures on venereal diseases. Professor Kyle comes forward with a scholarly discussion introductory to a series of talks on the more important diseases of the nose and throat; and the editor discusses the diagnosis of the boundaries and motor power of the stomach. Dr. Pyle will begin in the February number a series of talks designed to instruct general practitioners in the diagnosis of eye strain, faults of accommodations, etc.

BOOK-REVIEWS.

A Treatise on the Science and Practice of Midwifery. By W. S. Playfair, M.D., LL.D., F.R.C.P., Emeritus Professor of Obstetric Medicine in King's College, London. Examiner in Midwifery to the Universities of Cambridge and London. Seventh American from the ninth English edition. In one very handsome octavo volume of 700 pages, with 207 engravings and 7 full-page plates. Cloth, $3.75, *net;* leather, $4.75, *net.* Lea Brothers & Co., Publishers, Philadelphia and New York.

This work has justly claimed the attention and won the admiration of students and practitioners for the past twenty-one years. The present edition contains all the well-established facts of obstetric practice, and we note brief comments on most of the relatively recent studies such as symphyseotomy. Dr. Playfair gives to us the benefit of his long experience and ripe scholarship.

The chapters on "Conception and Generation" have been thoroughly revised by Dr. T. U. Eden, well known by his investigations in this particular field.

The ever-increasing fund of bacteriological knowledge has made it necessary to revise former statements of the bacteriology of the vaginal secretions and deciduoma malignum.

For accuracy and completeness, for lucid style and practical advice, this new edition is highly recommended.

Human Anatomy. A Comple Systematic Treatise by Various Authors, Including a Special Section on Surgical and Topographical Anatomy. Edited by Henry Morris, M.A. and M.B., London; Senior Surgeon to the Middlesex Hospital; Examiner in Surgery in the University of London, etc. Illustrated by 790 woodcuts, over 200 of them printed in colors. Second edition, revised and enlarged. Philadelphia, P. Blakiston's Son & Co. 1898.

A prominent southern physician, while discussing a paper on the use of chloroform in labor before the Section of Obstetrics of the American Medical Association some years ago, waxed eloquent as he described what a wonderful blessing the anesthetic is to women in mitigating the pangs of childbirth. At the climax of his impassioned speech he told of a woman who having brought into the world nine children without any such help, had chloroform administered while in labor with the tenth, and thereupon declared that she only wished she could have the nine all over again so as to be able to take chloroform with every one. After looking through this splendid work on the subject we would almost be willing to be obliged to study our anatomy all over again with such a wealth of graphic illustrations to help us. The later editions of the standard anatomies, which all the older physicians of the present had to depend on in their student days, have been greatly improved, but they are nothing like so fully and satisfactorily illustrated as Morris' work, while no better, at least, in the letter-press descriptions.

In this second edition some new cuts and a description of the skin by Mr. Wm. Anderson have been added. A new and valuable section on "Vestigial and Abnormal Structures," by Dr. Arthur Robinson, closes a volume which is in every way a most creditable specimen of the book-maker's art.

The Physician's Visiting List for 1899. Philadelphia, P. Blakiston's Son & Co. 1898. Price, $1.00.

The old Lindsay & Blakiston Visiting List is the one with which many of us began our practice and it is one of the most convenient and satisfactory ever devised. It has now reached its 48th year.

A Pocket Medical Dictionary. By George M. Gould, A.M., M.D. Philadelphia, P. Blakiston's Son & Co. 1898. Price, $1.00.

This is a revised and enlarged edition of a justly popular little volume. It

now contains over 21,000 words, besides numerous valuable tables. It is remarkably full and complete considering its diminutive size, yet the words are all printed in prominent, bold-faced type, and the corners of the book are rounded off so that they cannot become dog-eared. Dr. Gould is foremost among our medical lexicographers and this pocket dictionary is one of his best things.

A Compend of Obstetrics. By Henry G. Landis, A.M., M.D. Revised and Edited by Wm. H. Wells, M.D. Philadelphia, P. Blakiston's Son & Co. 1898. Price, 80 cents.

This sixth edition, illustrated, is not much changed from former ones. A few subjects, however, have been enlarged and some additions have been made. Such compends are of service to students and the elementary question-and-answer form of conveying information seems to meet their needs.

On the Study of the Hand for Indications of Local and General Disease. By Edward Blake, M.D. London, Henry J. Glaisher. 1898.

One would not have believed that so much of interest and importance could have been found to say about the hand. The author in his introduction narrates that on the rare occasions when a European physician is permitted to prescribe for a female member of any Mohammedan family of distinction, the only part of the patient which he is permitted to see is the hand, which is thrust for that purpose through a narrow opening in a curtain. We should think Dr. Blake's book would be indispensable to physicians who practice medicine in such countries. And most doctors in all countries could learn much of value from it. This little monograph contains 45 octavo pages besides a copious index, and is bound inexpensively in heavy paper.

A Text-Book of Materia Medica, Therapeutics and Pharmacology. Edited by George Frank Butler, Ph.G., M.D. Second Edition, revised. 1898. Philadelphia, W. B. Saunders. Price, $4.00, net, cloth; $5.00, net, sheep or half morocco.

The manner of arrangement of this book, its clearness and conciseness, make it most valuable to both student and practitioner.

Each drug has its origin, description and properties, dose, antagonists and incompatibles, synergists, physiological action, therapeutics and mode of administration given in order under its own head and in proper class.

It possesses valuable illustrations explaining the reflex actions of nerves and half-tones showing animals under the influence of poisonous doses of certain drugs.

The chapter on serum therapy is short, concise and thoroughly comprehensible.

A Text-Book of Pathology. By Alfred Stengel, M.D., Instructor in Clinical Medicine in the University of Pennsylvania; Professor of Clinical Medicine in the Woman's Medical College; Physician to the Philadelphia Hospital, etc. N. B. Saunders & Co., Philadelphia. Pp. 948. Price, cloth, $4.00; half morocco, $5.00, net.

When one has finished reading the Huxley lecture recently delivered by that modern father of pathology—Virchow—some conception is gained of the important bearing pathology has upon the progress of medicine.

If we know by what law faulty katabolism is to be carried on in disease we could tell the ultimate result—whether life or death would ensue. If we knew the essential pathology which controls all functional and organic diseases we could build up better the science of therapeutics. Wood has stated: "Tell me the pathology and I will tell you what to give." The progress of medicine, therefore, in great part, depends upon those whose knowledge is gained by examination of the lesions of the body post mortem.

We then cannot have too many systems of pathology provided they are good ones. This text-book of pathology by Stengel is therefore most welcome. It strikes a happy medium between the older editions of Woodhead and the more

recent one of Ziegler in two volumes. This is so much more in favor of the work of Stengel who has brought all the facts together within the cover of one book. The subject of pathology has made such rapid advances that "technique," formerly introduced, is now ruled out. Pathological technique has now become a study in itself and already large volumes are written upon that subject alone. This fact entails more expense upon those who desire to pursue this branch of medicine and it is to be regretted that a few words bearing on this topic cannot be inserted in later works on pathology without sacrificing valuable space.

This book presents the subject in precise words not too lengthily, but just of sufficient terseness that the meaning is easily comprehended without undue mental effort. It this respect it may be said that an intricate subject is made quite simple. The book divides the subject into two parts: I., General Pathology, and II., Special Pathology.

Part I., begins with the Etiology of Disease, Bacteria, Parasites, etc., Diseases of Nutrition and Metabolism, Disturbances of the Circulation of the Blood, Retrogressive Changes, Inflammation, Progressive Tissue Changes, Diseases due to Bacteria, Parasites, etc.

Part II., takes up Pathology of the Blood, Diseases of the Lymphatic Tissues, Diseases of the Circulatory System, Diseases of Respiratory Tract, Diseases of Gastro-Intestinal Tract, Diseases of Ductless Glands, Diseases of Urinary Organs, Diseases of Reproductive Organs, Diseases of Bones, Joints and Muscles, and Diseases of the Nervous System.

The subject of "Fever" is condensed into three pages, the author dividing it into *definition*, *nature*, *etiology*, *pathological results* and *conservative effects*.

Thrombosis and embolism are admirably treated. The subject of air embolism remains unsettled, for, as the writer states, while small particles of air occasion no serious disturbance, sudden death may ensue from larger quantities. "Amyloid Degeneration," which excites much attention among pathologists, is defined as: "The appearance in the tissues of amyloid material; whether formed *in loco* or deposited is not quite clear. Amyloid seems to be a combination of chondratin-sulphuric acid with a proteid." "Inflammation" occupies 15 pages. The etiology of carcinoma remains obscure. As one would expect from this author, diseases of the blood receive full and fair attention. Bacteria and bacterial diseases occupy 84 pages. Tuberculosis is defined as being an *infectious* and *contagious* disease.

The book is to be commended for the large number of illustrations, many of which are new, thus aiding in making technical explanations quite plain as well as producing a lasting impression upon the student. Numerous colored plates are also inserted, I. to VII., inclusive, which take high rank in work of this kind. While tube casts should and do find a place in works on pathology, those on pages 582 and 583 would seem to be anomalies rather than those most frequently found. The writer preserves simplicity in spelling, holding to leukocyte, noncontagious and endartery, seemingly to preserve euphony and to save conjunction.

The book is printed on good paper in convenient type, has a voluminous index, shows unmistakable evidence of a careful review and is to be recommended for both student and teacher.

WOLDERT.

THE TREATMENT OF SKIN CANCERS. By W. S. Gottheil, M.D. New York, International Journal of Surgery Co.

In this little book Dr. Gottheil treats briefly of the causes of cancer, its pathology, its various forms as they occur upon the skin, its diagnosis and treatment, and concludes by giving some illustrative cases. On account of the author's experience as a practitioner of dermatology his views on treatment are of particular interest. Dr. Gottheil dismisses all forms of internal treatment as useless and says that local treatment is the only one to be seriously considered. He goes over the various plans of local treatment generally in use and also gives some which are not so well known. In a résumé of the subject he says that in the majority of cases caustics are best, as they give the best results with the least liability to return. Excision is reserved for those exceptional cases in which from location or extent the caustic treatment is inapplicable.

Arsenious acid is the safest, surest and best of the caustics at our disposal, and seems to have a specific selective action upon the cells of the new growth. Pyrogallol may be employed in the most superficial cases. In cases involving the skin alone arsenic should be used after curetting in the form of Marsden's paste. Where the mucosæ are also or solely affected, arsenic can be used by the method of interstitial injection of Hue, or as a paint as recommended by Cerny & Trunecek. The galvanocaustic paint, the caustic potash stick and the chloride of zinc may also be employed. Cutaneous carcinoma, early and vigorously treated by the caustic method, is a very manageable disease and of good prognosis. A. V. H.

A Clinical Manual of Skin Diseases. With Special Reference to Diagnosis and Treatment for the Use of Students and General Practitioners. By W. A. Hardaway, A.M., M.D., Professor of Diseases of the Skin and Syphilis in the Missouri Medical College, St. Louis, etc. Second Edition, revised and enlarged, with 42 Engravings and 2 Plates. 1898. Phila. & New York, Lea Brothers & Co.

Among the numerous handbooks on diseases of the skin published in this country during the past few years, this work of Hardaway's is distinguished by its succinct thoroughness and its satisfactory character as a work of reference. As a book to lie on the practitioner's table it is convenient because of the clear and full directions for diagnosis and treatment, and its classified arrangement makes it valuable to the student preparing for examination.

A Primer of Psychology and Mental Disease for Use in Training-schools for Attendants and Nurses and in Medical Classes. By C. B. Burr, M.D., Medical Director of Oak Grove Hospital for Nervous and Mental Diseases, Flint, Mich.; Formerly Medical Superintendent of the Eastern Michigan Asylum. Second and Revised Edition. Pages ix+116. Extra Cloth, $1.00, net. The F. A. Davis Co., Publishers, Philadelphia; New York City and Chicago.

The good old times when the mildly insane were allowed to run about for the amusement of the populace while the dangerous cases were kept under lock and chain like wild beasts, is happily gone. At present, those of unsound mind are recognized as mentally sick, and their treatment is both humane and scientific. The greater part of the treatment devolves upon the attendants, and principally for them was this little volume written. In a brief but comprehensive manner the author lays down the fundamental principles of psychology and the rules for the management of cases. The definitions are simple, and the examples very illustrative. It is especially intended as an aid in the training-schools. A second edition has been found necessary to meet the demand for this valuable primer. To the publishers is due credit for the excellent manner in which their part of the work has been done. A. R.

Practical Urinalysis and Urinary Diagnosis: A Manual for the Use of Physicians, Surgeons and Students. By Charles W. Purdy, M.D., LL.D (Queen's University); Fellow of the Royal College of Physicians and Surgeons, Kingston; Professor of Clinical Medicine at the Chicago Post-Graduate Medical School. Author of "Bright's Disease and Allied Affections of the Kidneys;" also of "Diabetes: Its Causes, Symptoms and Treatment." Fourth, Revised Edition. With Numerous Illustrations, including Photo-engravings and Colored Plates. In one Crown Octavo Volume, 365 pages, bound in Extra Cloth, $2.50, net. The F. A. Davis Co., Publishers, 1914–16 Cherry St., Philadelphia; 117 W. Forty-second St., New York City; 9 Lakeside Building, 218–220 S. Clark St., Chicago, Ill.

By this time the excellent manual before us is so well known to most of the practitioners of our country that a review can only be a repetition of the most favorable comments expressed by the critics on the previous editions. The book possesses the exceptional merit of not being a mere compilation but a most painstaking presentation of all the methods employed in urinalysis as well as the most recent facts and theories concerning this important branch of physical

diagnosis. The author is fortunate in the possession of such an amount of knowledge and skill in laboratory technic as to have been enabled to test thoroughly the best of the current methods and to devise important modifications of many of them.

As a valuable contribution to urinalysis we may point out the author's method of centrifugal determination of chlorides, phosphates and sulphates by means of the percentage tube, thus simplifying the difficult and complicated chemical quantitative tests. This, however, can best be carried out with an electric centrifuge which is accessible to a few only. That a fourth edition has been found necessary shows how highly this book is appreciated by the profession, at the same time indicating how the importance of the laboratory as an aid in diagnosis is gaining general recognition. The reader will also find this edition not a mere reprint but a careful revision which keeps it abreast of the advancements recently made in urinalysis. In conclusion, we may mention that the "insurance examiner" also has not been forgotten. A chapter on "examination of urine for life insurance," is of special interest to the great number of physicians who are engaged in this work. The publishers have done all in their power to make the book as attractive as it is instructive.

A. R.

OBITUARY.

Dr. John B. Hamilton, former Surgeon-general of the United States Marine Hospital Service, and editor of the *Journal of the American Medical Association*, died at Elgin, Ill., December 24, 1898, from the effects of a severe cold complicated by an attack of peritonitis. An operation performed by Dr. Senn proved in vain. Dr. Hamilton was born in 1847, in Jersey county, Ill., and was graduated from Rush Medical College in 1869. The profession loses in him an excellent surgeon and an able editor. Our Marine Service will long reap the benefits of the reforms instituted during his service.

MEDICAL NEWS AND MISCELLANY.

Double Personality. Dr. Howard reports the following interesting case: Mr. B., a respected business man, married and father of 3 children. His position caused him to travel extensively in America. About 10 years ago he commenced to go away from home without giving any definite statement of where he was going or when he would return. Upon his return he would not give any direct answers as to where he had been on these occasions; he appeared slightly dazed in memory and intellect. Two years ago, in the month of October, he disappeared and no trace of him could be found until he returned home on January 14th. A man who knew him in his own city found him a month prior to this date conducting a country cross-roads store on the upper Potomac. He carried on business under the name of Simpson. He did not know his former acquaintance, and the repeated mentioning of his true name, "Mr. B.," he at first took as a joke, then became indignant, and was so positive in stating that he was Simpson, giving his past history, stating he was from Oregon, and going into full and complete details of his life and business in that state, that the former friend went away fully convinced of his mistaken identity. One peculiarity Simpson had, was his passion for fishing, and he gave as one excuse for having chosen the little village, that there was good bass fishing in the river. On the morning of January 14th he appeared at his own house, to the surprise and joy of the family. He was Mr. B. again, but no questions as to his past whereabouts could he answer. Only when he became convinced of the lapse of time did he realize that something strange and abnormal had happened to him. His memory of the last three months was a blank. When hypnotized, however, he said in answer to the suggestion that his name is unknown, "D—n it, you know my name is Simpson; what do you want to bother me about it for? You remember that, or else I don't take you fishing." "Well, Mr. Simpson, let's go fishing." "All right; wait till the boy comes back and I will close up the store." "By the way, Mr. Simpson, how far is it to the city?" "Oh, about 40 miles." By this manner of questioning Mr. Simpson I found where the body of Mr. B. had been. The next day I hunted up Mr. Simpson's store, and found, indeed, that such an individual existed in the life of the village.

Maryland Medical Journal.

English as She is Wrote in Japan. The following postal card received some weeks ago at the office of the INTERNATIONAL MEDICAL MAGAZINE is a unique specimen of oriental English:

TOKYO, August 5th, '98.

Gentlemen:

As for the sending of your *Magazine*, I hope you will stop to send it, till the time if I would order again or renewedly, for it goes for nothing to me; while I am very busy and absentee at present for always.

Yours truly,

ATLANTIC CITY IN WINTER.

Some of the Reasons Why Patients Are Sent There.

Special Correspondence of the International Medical Magazine.

Atlantic City, N. J., January 12, 1899.

To the Editor:

Americans have reason to be proud of Atlantic City as a great health resort. The number and variety of its attractions and conveniences for invalid visitors are well known to the majority of physicans in the eastern cities through the practical results observed in patients sent here. Moreover, great numbers of physicians have experienced in their own persons the beneficial influence of a sojourn here by the sea when out of health. And it is hardly possible to find a locality now, even in the most remote regions west or south, which the fame of Atlantic City has not reached. People come here during the summer season from everywhere not only for their health, but to escape the heat, to bathe in the salt water and to have a good time generally.

But why should people go to Atlantic City in winter? I imagine some of our uninitiated medical friends to be asking. Nobody claims that the climate is remarkably warm here from January to June, which constitutes the fashionable winter and spring season. It is considerably warmer of course than in New England, New York, the middle northern and the western states, since the ocean exerts a decidedly mollifying and equalizing influence upon the temperature. Still the thermometer often falls below the freezing point, especially at night; the wind sometimes blows, and exceptionally there may even be snow on the ground.

What then is the attraction? Why do patients who have spent a winter here come back often year after year? Why do physicians send their patients even in mid-winter when all other therapeutic measures have failed, and why do such patients return home after a sojourn of one or two months here with improved appetites, restored sleep and the rosy bloom of health?

I will explain the mystery. It is all due to a fortunate combination of health-giving influences which includes, first of all, unusual facilities for keeping out of doors almost constantly in the open air. This alone would work magical results anywhere, even in a less invigorating climate, to pallid air-starved invalids accustomed to confinement in close, superheated rooms. The broad level "Board Walk" which skirts the beach in front of the town for some three miles is connected by convenient foot ways with the piazzas and enclosed sun parlors of over thirty hotels all provided with every possible equipment for the care and comfort of ailing people. Hundreds of luxurious wheeled chairs manned by stout attendants in uniforms are waiting at convenient points along the Walk and about the hotels, and above all, it is the fashion to ride in them. Most patients when well wrapped and carefully tucked in, can ride in one of these chairs up and down the Walk all day even in a cold spell without risk and with the greatest advantage. The Walk is so wide that a dozen or more of the

wheeled chairs can move abreast without crowding and during the height of the winter season it is often filled from side to side with the moving throng of such vehicles together with large numbers of pedestrians. There is plenty to interest and amuse those thus engaged in wooing back health by means of this unique kind of open-air cure. On the land side there is an almost continuous row of attractive shops and places of amusement opposite the center of the town, while on the other side, Old Ocean with ships frequently to be seen in the offing, proves a never-failing attraction. Besides, the reflecting surface of the great expanse of water doubles the power of the light, and so it is that every sunshiny day on the Board Walk with the pure, ozone-laden, invigorating sea-air works wonders in the up-building of the shattered nerves and exhausted constitutions of the many thousands of these perambulating health-seekers.

Time and space fail to give a detailed description in this letter of the many incidental attractions of Atlantic City, such as its Casino, and other fashionable places of recreation, its excellent sewerage system and fine water supply, its walks and drives, the choice society to be met at its leading hotels, its first-class physicians and drug-stores, and the splendid transportation facilities offered especially by the Pennsylvania Railroad with its ramifications north, west and south. It may interest your readers to hear more of these in subsequent letters.

MEDICUS.